

**SWGDRUG Meeting Minutes**  
**Dulles, VA**  
August 15-18, 2022

**Core Committee Members (present):**

**Scott R. Oulton, Chair** Drug Enforcement Administration (DEA)  
**Christian C. Matchett, Vice-Chair** Southern Association of Forensic Scientists (SAFS)  
**Sandra E. Rodriguez-Cruz, Secretariat** Drug Enforcement Administration (DEA)  
**Karen S. Bowen** Midwestern Association of Forensic Scientists (MAFS)  
**Linda C. Jackson** American Society of Crime Laboratory Directors (ASCLD)  
**Richard Laing** Health Canada  
**Ben Painter** Australia New Zealand Policing Advisory Agency (ANZPAA)  
**Eric Person** California State University, Fresno  
**Tiffany A. Ribadeneyra** Northeastern Association of Forensic Scientists (NEAFS)  
**Sandra B. Sachs** California Association of the Criminalists (CAC)  
**Roger Schneider** Southwestern Association of Forensic Scientists (SWAFS)  
**Ruth W. Smith** Michigan State University  
**William E. Wallace** National Institute of Standards and Technology (NIST)  
**Agnes D. Winokur** ASTM International and Drug Enforcement Administration (DEA)  
**Tiong Whei Angeline Yap** Asian Forensic Sciences Network (AFSN)

**Core Committee Members (not present):**

**Michael Bovens** European Network of Forensic Science Institutes (ENFSI)  
**Jason D. Brewer** Federal Bureau of Investigation (FBI)  
**Juli Cruciotti** Mid-Atlantic Association of Forensic Scientists (MAAFS)  
**Adriano Maldaner** Iberoamerican Academy of Criminalistics and Forensic Studies (AICEF)  
**Yen Ling Wong** United Nations Office on Drugs and Crime (UNODC)

Guests:

**Jaclyn Iera** Drug Enforcement Administration (DEA) – Note taker  
**Anne Slaymaker** Drug Enforcement Administration (DEA) – Virtual attendance

**MONDAY, August 15, 2022**

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**Welcome Remarks and Introduction of Guests**

- SWGDRUG Chair Scott Oulton introduced invited guest Benjamin Painter from Forensic Science SA (Government of South Australia), who is replacing Catherine Quinn as representative of the Australia New Zealand Policing Advisory Agency (ANZPAA); and special guests Jaclyn Iera who will be serving as note taker for the week and Anne Slaymaker who will be attending virtually, both from DEA.
- Mr. Oulton introduced the associate laboratory director of DEA's Special Testing and Research Laboratory, Richard Meyers, thanked core members for their attendance, and gave special thanks to Secretariat Sandra Rodriguez-Cruz for coordinating the logistics of the meeting. He also provided an update of DEA and DEA policy.
- Laboratory Director David Love welcomed everyone to the Special Testing and Research Laboratory for the week.

- After a three year hiatus, each member of the group provided an update on their professional and personal lives during the pandemic.

### **Updates from Organization Representatives**

- Dr. Angeline Yap provided the Asian Forensic Sciences Network (AFSN) update including the Illicit Drugs Workgroup (IDWG) Updates. She summarized a 2020 survey to identify top 5 drugs of abuse with ICE as the top drug of abuse as well as the average purities of the drugs of abuse by region. Dr. Yap also summarized NPS trends from 2011-2022 to include type, form, and control status with synthetic cannabinoids being the most commonly identified NPS. She discussed the challenges with identifying NPS and shared the report published by the laboratory with newly identified NPS (Note: Notify Dr. Yap if you would like to receive the report). Dr. Yap then presented the digitalization of the HSA lab using a new LIMS system, the use of Robotic Process Automation (RPA) for conducting daily GC-MS autotunes, and the use of macro programming to automate processing of GC-MS and FTIR data. Dr. Yap recommended a SWGDRUG sub-committee to share developed RPA and macros for laboratory use.
- Ms. Agnes Winokur provided the ASTM – E30 Forensic Sciences update. E30 has been classified under ANSI and Ms. Winokur provided an overview of the new ANSI process that involves public comment. Public comments are treated like negative votes through ASTM balloting and require a response within 7 days. Ms. Winokur clarified that OSAC is responsible for the development of new standards and ASTM handles the revisions of the standards. She then gave an overview of the standards that are going through the revision process. In particular, the uncertainty standard has been broken into two standards, quantitative and qualitative. AAFS has also been presenting webinars to promote information related to standards.
- Ms. Linda Jackson informed the group there was no specific seized drug update related to ASCLD. She then presented the Forensic Laboratory Needs Technology Working Group (FLNTWG) supported by NIJ. The working group was created to help disseminate information on development of new technology and to find early adopters of new information and tools, as well as to share experiences and help implement new technology. Four white papers have been published to describe new technologies in forensic sciences. Within the working group are several sub-committees which look at various aspects. A novel seized-drugs sub-committee is looking at techniques for drug analysis such as ambient ionization techniques, gas-phase IR, GC vacuum UV, lateral flow immunoassay (LFIA), and microcrystalline tests.
- Dr. Bill Wallace provided an update on the NIST libraries. The next NIST EI-MS library comes out in June 2023 and NIST libraries (GCMS, LCMS, DART-MS) contain compounds produced by Cayman and others. Dr. Wallace discussed the inverse library search algorithm or ILSA that can perform an inverse analysis using the different voltages on DART-MS. Bruker will include ILSA in their new DART-MS software. NIST is also doing research on hair proteomics and looking at genetically variant peptides in hair that reflect the DNA. Developing a similar project with keratin in fingerprints is also being evaluated.
- Benjamin Painter provided the update on the Australia New Zealand Policing Advisory Agency (ANZPAA). Mr. Painter summarized the general illicit-drug marketplace trends with methamphetamine and cannabis being prominent substances of abuse. The Australian region has also seen a significant increase in 1,4-butanediol seizures. Mr. Painter also presented information related to the special operation Ironside and the ANOM app that captured a number of criminals. Mr. Painter also discussed the status of cannabis and fentanyl in the

region. Medicinal cannabis is an emerging industry in Australia with legislation yet to move towards decriminalization, and thus far the region is not seeing illicit oxycodone tablets or significant amounts of fentanyl. Mr. Painter also presented clandestine lab trends due to pseudoephedrine being rescheduled. Lastly, Mr. Painter presented two papers from his area:

- 1) "A risk-based approach to cognitive bias in forensic science" A. Camilleri, et al. Science & Justice 59 (2019) 533-543
  - 2) "Establishing likelihood ratios for evaluating opposing propositions concerning the activity causing methamphetamine contamination: Smoking or manufacture?" M. Russel, et al. Forensic Science International 326 (2021) 110939
- Mr. Richard Laing presented a retrovalidation of the standardized analytical schemes utilized by Health Canada. A correlation study of various schemes used for the analysis of seized drugs was performed to look at their selectivity. The model looks at common ions between substances and uses correlation coefficients to determine if two compounds can be differentiated using the methods and techniques selected. This process highlights the challenges with identifying certain compounds (e.g. opiates, isomers) as well as the usefulness of the methods available.
  - The day concluded with a tour of DEA's Special Testing and Research Laboratory. The lab is currently undergoing an expansion of laboratory space.

## **TUESDAY, August 16, 2022**

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- Dr. Michael Bovens presented the ENSFI 2020-2022 updates virtually from Zurich, Switzerland. Dr. Bovens gave an update on the ENSFI Board, strategy planning and its work products (e.g., trends in forensic sciences, white papers, education and training). He also provided highlights from the ENSFI Drug Working Group 2022 meeting in Belgrade: current legislation in Europe, trends on illegal substances (to include synthetic cannabinoids and THC), a workshop on chemometrics, and discussions on the Eurachem Guideline on Uncertainty in Qualitative Analysis.

To download the ENSFI "Guideline for the use of Chemometrics in Forensic Chemistry" – <https://enfsi.eu/about-enfsi/structure/working-groups/documents-page/documents/forensic-guidelines/>

To download the Eurachem "Assessment of performance and uncertainty in qualitative chemical analysis" - <https://www.eurachem.org/index.php/publications/guides/performance-and-uncertainty-in-qualitative-analysis>

Dr. Bovens also discussed the ISO 21043 Part 1-5 Technical Committee. Guidelines are scheduled to be finalized in 2023-2024 and he encouraged the SWGDRUG core committee members to review the documents.

- Mr. Roger Schneider presented updates from the Phoenix Police Department activities. An increase in fentanyl identifications and fentanyl tablets has occurred over the past 5 years. He also presented the new trend of fentanyl tablets also marked with M 30 and being produced in multiple colors to look like "Skittles".
- Ms. Agnes Winokur provided an update of the OSAC Seized-Drug Subcommittee membership.

She discussed a list of standards published on the OSAC registry and gave an overview of the upcoming process map for seized drugs. Ms. Winokur presented the standards going through the OSAC standards review process, STRP, which are standards put on the registry prior to going to the standard developing organization (SDO). She also gave an overview of active task groups in the Seized-Drug Subcommittee and discussed the challenges with test methods and inter-laboratory studies. A partnership has been established between the OSAC Subcommittee and FTCOE and NIST to work on test methods and inter-laboratory studies.

- At the conclusion of all the updates, Mr. Matchett discussed assignments for the week.
  - Part IVA and SD-5 went out for public comment in 2019 and adjudication has been completed. Comments need to be reviewed and discussed with group.
  - Part IVB Validation of analytical methods, Annex A (SWGDRUG Glossary), and SD-2 require updating; consider ongoing ASTM E2549 revisions.
  - What are additional needs of the community?
    - Develop additional tools and resources (live webinars, recorded presentations)
    - Harmonizing the documents with ASTM and OSAC
    - QC on automated processes
    - Sub-committee on calculating error rates for qualitative analysis
    - Evaluation of educational experience across the globe
    - Enhance SD-7 with new analytical scenarios
- During the afternoon, the group reviewed Part IVA and SD-5 public comment adjudications led by Ms. Tiffany Ribadeneyra.
  - 4 items to address/parking lot
    1. Comparing to and harmonizing with ASTM E3255
    2. Preventative measures
    3. Reporting of limitations
    4. Chemical traceability

### **WEDNESDAY, August 17, 2022**

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- Mr. Matchett opened the meeting with administrative items.
- Group work continued on adjudicating Part IVA and SD-5 comments led by Ms. Ribadeneyra.
- Dr. Sachs led a discussion on proposed changes to Part IVB. Discussion covered differences between SWGDRUG and ASTM E2549.
- The group discussed ideas for sub-committee projects.
  - MS tools (macros, NIST instructions, interrogating unknown peaks, etc.)
  - Chemical disposal and drug burn recommendations
  - Reporting examples for pro-drugs, precursors
  - QC measures and validation of robotics, software
  - Gap assessment of educational requirements (practical lab skills, coursework)\*\*
  - Look at SD-7 for expansion (focused on extractions, intelligence based reports, non-controlled precursor, diluent)\*\*
  - Webinars, Education (language, closed caption)\*\*
  - What makes an MS Category A
  - What makes a sample negative\*\*(\*\* notates selected ideas for sub-committee work)

- Group broke into sub-committee for the remainder of the afternoon.
  - Sub-committees:
    - IV-B Validation – Sandra Sachs, Eric Person, Anne Slaymaker, Richard Laing
    - IV-A Revisions – Tiffany Ribadeneyra
    - Educational Requirements – Karen Bowen, Agnes Winokur
    - SD-7 Expansion – Ben Painter, Jaclyn Iera, Sandra Rodriguez-Cruz
    - Negatives – Christian Matchett, Linda Jackson, Bill Wallace
    - Webinars – Roger Schneider, Angeline Yap, Ruth Smith

## **THURSDAY, August 18, 2022**

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- Mr. Oulton officially invited Mr. Benjamin Painter to join the SWGDRUG core committee as the ANZPAA representative. Mr. Painter accepted the appointment.
- Ms. Ribadeneyra led an overview of the final Part IVA and SD-5 documents prior to afternoon voting.
- Sub-committee work continued for the remainder of the morning.
- Ms. Bowen provided an update on the discussions of the education and training sub-committee. The group looked at section Part II.2 of the Recommendations and discussed adding phrase to clarify that experience should have a hands-on laboratory component or a method to assess laboratory skills. The group also recommends referring to 2 ASTM standards on training for forensic science practitioners for more information.
- The group took a pause from sub-committee presentations to vote on publishing Part IV-A and SD-2.
- Ms. Juli Cruciotti provided voting proxy to Ms. Jackson via email. Voting quorum was achieved and voting can proceed per SWGDRUG bylaws.
- Mr. Roger Schneider put a motion forward to approve revisions to Part IVA of the SWGDRUG Recommendations and the comments adjudication spreadsheet and posting, pending editorial review.
- Dr. Eric Person seconded the motion.
- Motion passed by unanimous decision.
- Ms. Tiffany Ribadeneyra made motion to accept the amendments to SD-5 comment adjudication spreadsheet, pending editorial review.
- Dr. Sandra Sachs seconded the motion
- Motion passed by unanimous decision.
- Mr. Oulton and Mr. Matchett thanked Ms. Ribadeneyra and the sub-committee for working on the documents.

- After voting, the group continued discussion on sub-committee taskings.
- Mr. Schneider presented the ideas the sub-committee discussed. Suggestion to include 1) photos of members on the SWGDRUG webpage; 2) webinars of hot topics (e.g. validation, SD-7, SD-6, NIST software); 3) monthly 5-minute quick “hits” on topics; 4) increase social media presence; 5) podcasts; 6) forming a content sub-committee; and 7) the need to discuss quality of presentations and platforms available around the work.
- Mr. Painter presented the ideas and work of the sub-committee expanding SD-7. The group came up with several new analytical scenarios. Red Phosphorus was one item suggested which led to further discussions and a couple of schemes. Also include examples with immunoassay (IA) testing, derivatization of psilocin/psilocybin or GHB/GBL, edibles with LSD (using GC-MS SIM), and a negative and/or diluent scenario. Suggestion to include a DART-MS/IA scheme was provided as well as a suggestion to update one of the schemes to include a fentanyl-related isomer with similar MS (e.g. cyclopropyl and crotonyl fentanyl).
- Mr. Matchett introduced the new SWGDRUG email address of [swgdrug@dea.gov](mailto:swgdrug@dea.gov).
- Mr. Matchett presented the ideas discussed by the sub-committee looking at negatives results. There is an opportunity in Part IIIB to address the scenario and provide guidance. In the introduction, it states that the question to be answered leads to the analytical scheme so the group recommends language to address when laboratory testing may be stopped and ‘stopping criteria.’ Suggestions to also recommend labs have policies on reporting negative results to include risk-management and bias considerations were also presented.
- Dr. Sachs provided an update on Part IVB – Method Validation discussions. The group narrowed down performance characteristics and will put other characteristics into an ‘other considerations’ section. They hope to have a draft prior to the next meeting for group review. The draft will include a proposal to include a “Validation Summary” example document as an appendix and may also include a process map.

### **Meeting Conclusion and Summary**

- Mr. Oulton expressed his appreciation at meeting with everyone again after a 3-year hiatus. He expressed desire to continue discussions regarding SWGDRUG’s place in standards with ASTM/OSAC. SWGDRUG will meet in 2023 pending available funds; Mr. Oulton will continue to strive to secure funding.
- Mr. Oulton announced changes to the core committee and would like to celebrate departing members: Ms. Linda Jackson, Ms. Juli Cruciotti (absent), Mr. Roger Schneider, Ms. Karen Bowen, Dr. William Wallace, and Ms. Agnes Winokur. Each departing member was presented with a plaque acknowledging their years of service with SWGDRUG.
- Mr. Oulton invited and welcomed new members Dr. Anne Slaymaker and Dr. Jaclyn Iera and provided an overview of the SFM/SFQ subject matter experts (SME) at DEA.
  - Only one new member, either Dr. Slaymaker or Dr. Iera will have voting rights. The other will serve as the new SWGDRUG Secretariat (TBD at later date).
- Mr. Oulton appoints Dr. Rodriguez-Cruz as the new Chair of SWGDRUG and announces his resignation from SWGDRUG.

- Dr. Person suggested developing a method for keeping previous SWGDRUG members involved in some fashion, to maintain the historical knowledge and perspective (similar to OSAC affiliates).
- Mr. Matchett finalized administrative details.
- Dr. Rodriguez-Cruz declared the meeting adjourned.

Minutes respectfully submitted by Dr. Jaclyn Iera.