

SWGDRUG Meeting Minutes
San Antonio, TX
June 11-14, 2018

Core Committee Members (Present)

Scott R. Oulton, Chair, Drug Enforcement Administration
Christian C. Matchett, Vice-Chair, Southern Association of Forensic Scientists
Sandra E. Rodriguez-Cruz, Secretariat, Drug Enforcement Administration
Michael Bovens, European Network of Forensic Science Institutes
Conor Crean, United Nations Office on Drugs and Crime
Richard Laing, Health Canada
Adriano Maldaner, Iberoamerican Academy of Criminalistics and Forensic Studies
Catherine Quinn, Victoria Forensic Science Centre, Australia
Tiffany A. Ribadeneyra, Northeastern Association of Forensic Scientists
Sandra B. Sachs, California Association of Criminalists
Agnes D. Winokur, Drug Enforcement Administration and ASTM International
Tiong Whei Angeline Yap, Asian Forensic Sciences Network
William E. Wallace, National Institute of Standards and Technology
Juli Cruciotti, Mid-Atlantic Association of Forensic Scientists

Core Committee Members (Not Present)

Eric Person, California State University, Fresno
Roger Schneider, Southwestern Association of Forensic Scientists

Guests

Ruth W. Smith, Michigan State University
John W. McIlroy, Note Taker, Drug Enforcement Administration
Linda C. Jackson, American Society of Crime Laboratory Directors
Jason D. Brewer, Federal Bureau of Investigation
Richard P. Meyers, Drug Enforcement Administration
Karen S. Bowen, Midwestern Association of Forensic Scientists

Monday, June 11, 2018

Welcome Remarks & Introduction of Guests (Scott R. Oulton)

SWGDRUG Chair Mr. Scott Oulton opened the meeting by welcoming the committee members. He also welcomed new guests in attendance: Linda C. Jackson, Jason D. Brewer, John W. McIlroy, and Richard P. Myers. The rest of the core committee members introduced themselves.

Discussion Items & Goals for the Week (Scott R. Oulton)

DEA Office of Forensic Sciences Update

- Mr. Oulton discussed updates at DEA and DOJ. DEA and other DOJ agencies are in the process of posting of their quality documents, analysis manuals, etc. online.

- DEA is in the process of preparing for international re-accreditation.
- DOJ is requiring review of all court testimony provided by analysts. There was a discussion of current policies/issues at DOJ regarding this mandate. Mr. Oulton summarized some of the concerns that have arisen as a result of these new requirements. For example, how to obtain and pay for court transcripts, implementation of a court testimony reviewing process, how to proceed on instances where the transcripts have been sealed and could not be reviewed, etc.

SWGDRUG Funding, Future Direction, and Meetings

SWGDRUG will continue to receive funding from DEA. There was a discussion to increase the frequency of meetings from once a year to once every 6-9 months (January and July if every 6 months). This will depend upon availability of funding and approval.

SWGDRUG Resources

- SWGDRUG will continue to update the IR library on a regular basis; over 500 compounds have been added already. Issues of polymorphisms observed in the IR library, especially for NPS, were also discussed. SWGDRUG is also continuing to update the mass spectral library. The partnership with NIST to assist in validating the data is also working well.
- The DEA's Special Testing Laboratory will continue to produce the drug monographs. The monographs and mass spectral database are generating the most hits on the website. The Center for Forensic Science Research and Education (CFSRE) and Forensic Drug Review are also producing and sharing drug monographs for compounds not currently provided by SWGDRUG. There was discussion regarding the different review processes followed by the different organizations providing the manuscripts. Efforts will continue to be made to ensure rigorous review processes for all monographs.
- Agnes D. Winokur notified the committee about the new Opioid Communication Network. This is a forum for forensic practitioners (chemists, toxicologists, and AUSAs) to discuss analytical and forensic concerns. It also serves as an 'early warning system' for new compounds. The forum has approximately 150 members since coming online in August. To be included in the updates, contact Agnes Winokur at (agnes.d.winokur@usdoj.gov)
- The creation of a SWGDRUG email list was discussed, as well as other ways to disseminate information. Currently information is made available via the website (<http://swgdrug.org>), through Twitter (@swgdrug), and via in-person presentations at the AAFS meetings or by core committee members to their respective forensic organizations. Last year, the first edition of the SWGDRUG Bulletin was also distributed to commemorate the 20th anniversary of SWGDRUG. Mr. Oulton will work on establishing a SWGDRUG email list during this meeting. Utilizing a DOI was also suggested in order to keep postings or bulletins permanently available on the internet.
- The creation of a centralized landing page with organized links to resources (such as AAFS, ENFSI, ASCLD, etc.) was also suggested.

Chemistry SAC Update (Scott R. Oulton)

OSAC Affairs and NIST continue working on developing “OSAC 2.0”, the future version of the forensic organization in which NIST would guide its development and then it would be taken over by another agency/organization. Mr. Oulton also discussed the opportunities within OSAC to develop interdisciplinary documents and he expanded on the recently developed standard for education, training and continuous education of forensic practitioners, which included representatives from all 25 subcommittees within OSAC.

Seized Drugs Update (Sandra E. Rodriguez-Cruz)

- E2329-17 (Practice for Identification of Seized Drugs) is currently open for FSSB vote. If successful, it will then move into the appeal process for a month. After that, it should be posted on the OSAC Registry and replace E2329-14. The NIST statement posted on March 2016 is also expected to be removed at that time.
- E2764-11 (Practice for Uncertainty Assessment in the Context of Seized-Drug Analysis) and E2882-12 (Guide for Analysis of Clandestine Drug Laboratory Evidence) recently went through ASTM ballots. Comments received are currently being adjudicated. Once approved and published by ASTM, both of these documents will be submitted to the OSAC Registry process by the Seized Drugs subcommittee. OSAC members from NIST and the Legal Resource Committee participated in the ASTM working groups that worked on the revisions of these two documents.
- The Seized Drugs subcommittee has been working on new draft documents. The first document titled “Assessment of GC and EI-MS data During the Qualitative Analysis of Seized Drugs” is nearly completed. The subcommittee is currently discussing potential future documents on the “Assessment of FT-IR Data” and a guidance document on “Establishing Blind Proficiency Test Programs in Seized-Drug Laboratories”.
- The harmonization of documents between ASTM, OSAC and the SWGDRUG Recommendations was discussed. Members of the core committee concurred that 100% harmonization of all documents is not necessary, but recognized the need to consider any changes made by ASTM or OSAC by the SWGDRUG committee for future incorporation into the Recommendations.

Updates from Organization Representatives

- **ASCLD** – Linda Jackson
 - ASCLD has resources available regarding the opioid crisis at www.asclcd.org/opioid-resources.
 - Created an ‘Opioid Safety and Handling: Best Practice Recommendations’ document
 - One of the documents is a resource for laboratory managers on common instrumentation, their use in the analysis of NPS, approximate costs, etc. This document can help lab directors and other decision makers choose appropriate instrumentation for a laboratory.
- **NIST** – William E. Wallace
 - NIST is continuing its partnership with SWGDRUG (via DEA laboratories) for the validation of the SWGDRUG mass spectral library.

- AMDIS and MS Search programs (<https://chemdata.nist.gov/dokuwiki/doku.php?id=chemdata:start>) are free and available to use.
- There was a suggestion to provide on-demand webinars and other training tools for NIST resources via the SWGDRUG website. This would allow for training and more implementation in forensic drug laboratories.
- **FBI** – Jason D. Brewer
 - The FBI and DOJ have been developing resources on reporting and testimony language that may be helpful to the rest of the group.
 - There are ongoing discussions between the FBI and the legal and statistics community to evaluate error rates for qualitative analysis.
 - FBI is in the process of updating their validated methods and SOPs and posting them online.
- **AFSN** – Tiong Whei Angeline Yap
 - The last annual meeting in 2017 had over 600 attendees. The next meeting will be the 10th annual meeting and will take place in Beijing in September 2018.
 - Currently, there are 6 technical working groups within the organization.
 - AFSN conducts a yearly drug survey covering the AFSN member institutes in Asia.
 - Dr. Yap discussed the predominant drug types encountered during the past few years, by country, and discussed current drug trends. She also discussed NPS trends per country.
 - Problems for obtaining standards for NPS are still encountered throughout the AFSN regions.
 - Dr. Yap provided an overview of the NPS analysis workflow at the Health Sciences Authority (HSA) in Singapore
 - Dr. Yap also presented the first reported case of a NPS clandestine laboratory in Singapore, which was seized last year.
- **ENFSI** – Michael Bovens
 - ENFSI covers 37 countries with 69 representative laboratories.
 - The Drug Working Group met in May 2018 in Lisbon Portugal. Dr. Bovens provided the following meeting highlights:
 - An emergence of methadone production laboratories in Latvia has been reported.
 - Cocaine false positives have been observed with some screening methods due to the presence of ketocaine in some samples.
 - EMCDDA has suggested that synthetic cocaine derivatives may be the next big new trend in NPS.
 - To address issues differentiating industrial hemp from recreational marijuana, a new color test has been developed which can quickly and easily differentiate the two.
 - The Netherlands has approved smokable prescription THC.
 - The Netherlands has reported the synthesis of Heroin from morphine, rather than being imported.
 - So far, there have been over 30 different fentanyl analogs reported.
 - The use of liquid chromatography with corona-charged aerosol detection (UHPLC-CAD) for the identification of synthetic cannabinoids, and without the use of reference standards.
 - Work continues on the development of a best practice manual for the analysis of seized drugs.
 - ISO 21043 for drug analysis, interpretation, reporting is also under development.

- ENFSI Drug Working Group continues to manage its NMR, IR, and MS databases.
- There is ongoing development of a chemometric software and manual for applying multivariate statistics to forensic data.
- Dr. Bovens also discussed current issues in forensic science, specifically dealing with wording suggested to clarify how certain aspect of analysis are reported.
 - This led to discussion on analytical schemes and how to deal with limitations that may arise from different compounds, especially for NPS.
 - Another discussion centered on how to document the limitations of a method, emphasizing that the entire analytical scheme should be considered in order to form conclusions and that the latter are not necessarily made at each step (method) in the scheme.
- **Health Canada – Richard Laing**
 - Canadian laboratory system started producing online quarterly reports with information on drug trends and number of exhibits submitted to laboratories.
 - Health Canada is moving towards corporate ISO 17025 accreditation.
 - There is a general trend of relying less on GC-FID and GC-MS analysis and more on LC-MS, NMR, and GC-FTIR, especially for cases involving NPS.
 - A new Strategic Research and Science Development team has been created.
 - Health Canada has begun to standardize their analysis methods and validating their drug analysis schemes.
 - Ongoing discussions also include the online publication of their quality assurance documents.
 - Certified reference materials have been difficult to obtain through DEA due to export rules.
 - Mr. Laing presented a qNMR processing algorithm developed by Health Canada analysts for the quantitation of seized drugs without need for certified reference materials.

Updates from Sub-committee Chairs

- **SD-6 Calculator**
 - The calculator is almost completed. The goal this week is to finish its validation and instructions page, and have it ready for posting.
 - Sub-committee members: Michael Bovens and Tiffany Ribadeneyra
- **Examples of method validations**
 - Goal this week is to finish work on scenarios for GC-MS, IR, and color test method validation and incorporating them into a revised version of the already-existing SD-2 document. Work will also include harmonizing terminology as used in Recommendations Parts IVA, IVB, and the SWGDRUG Glossary.
 - Sub-committee members: Sandra B. Sachs, Adriano Maldaner, Juli Cruciotti, John W. McIlroy, Jason D. Brewer, Richard P. Myers, William E. Wallace
- **Recommendations Part IIIB and SD-7**
 - The goals this week are to finish Part IIIB and the supplemental document containing examples of analytical schemes, and have those both ready for public comments.
 - Sub-committee members: Catherine Quinn, Conor Crean, Richard Laing, Agnes D. Winokur, Angeline Yap, Karen S. Bowen, Ruth Waddell Smith, Linda C. Jackson

Tuesday, June 12, 2018

- Ruth W. Smith presented her academic research on the development of statistical methods for comparing unknown sample and reference material spectra. She discussed examples illustrating the validation of the methodology and its application to controlled substance identifications.
- Sandra B. Sachs led a committee discussion on numerous terminology items that will be part of the revised SD-2. Much of the discussion centered on the definitions of sensitivity, and specificity, and whether to use their classical quantitative analysis definitions, or those based on conditional probabilities to evaluate the uncertainty associated with qualitative analysis.
- During the rest of the day, the committee broke into previously assigned sub-committees and continued work products.
 - SD-6 Calculator
 - Examples of method validations (SD-2)
 - Recommendations Part IIIB and SD-7

Wednesday, June 13, 2018

- Sub-committees continued work on assignments.
 - SD-6 Calculator
 - Examples of method validations (SD-2)
 - Recommendations Part IIIB and SD-7

Thursday, June 14, 2018

Updates from Sub-committees and Other Discussion Items

- Cate Quinn led a discussion on the latest draft of Part IIIB, which was provided to the core committee members at the end of Wednesday.
- The latest draft of SD-7 (examples of analytical schemes) was also discussed.
- Mr. Scott R. Oulton led a close-door discussion regarding new memberships. Ruth W. Smith, Linda C. Jackson, and Karen S. Bowen were voted to become full members of the SWGDRUG core committee.
- Mr. Christian C. Matchett notified the group that he will be sending out another edition of the SWGDRUG bulletin in the upcoming weeks.
- Richard Laing made a motion to accept SD-7 pending editorial changes, and to post it for public comments. Linda C. Jackson seconded the motion. Additional group discussions confirmed there was no need to include additional examples. The motion passed unanimously.
 - Final draft of SD-7 will be sent out to the core committee (after meeting) for review of editorial changes.

- Catherine Quinn made a motion to accept modifications to Part IIIB, pending editorial changes, to post for public comments. Juli Cruciotti seconded the motion. There was no further discussion. The motion passed unanimously.
- **SD-6 Calculator**
 - Tiffany Ribadeneyra demonstrated the use of the new calculator and discussed the finalized validation report.
 - Ms. Ribadeneyra will email the calculator and validation report to all (after the meeting) and she requested members to review it and, if possible, test it using data from their own laboratories. Voting on the final document will be completed via email.
 - The goal is to post the calculator and the validation report before the end of the calendar year. Any necessary discussions will take place via email communications.
- **Examples of Method Validations (SD-2)**
 - Dr. Sachs provided an update on the validation examples and SD-2 revisions. She reminded the committee of the work that will also be needed on Part IVB, where the overall process for performing method validation is discussed.
 - SD-2 will include examples of GC-MS, FTIR, and color test validations. Examples are mostly complete but require some editing; they will be sent out to core committee for review once finalized. SD-2 will only contain the validation examples. The method validation recommendations will continue to be found in the main document.
 - The following items are still pending: a section providing guidance on how to execute a retrospective validation; and another section addressing method modifications and when validation is needed or not. The current SD-2 quantitative method validation example will also need revision.
 - Based on sub-committee discussions, there is a need for a core committee discussion on the need for LOD determination during qualitative method validations.
 - During the upcoming months, Linda C. Jackson and Sandra E. Rodriguez-Cruz will revise Parts IVA and IVB and forward to all for core committee review. Discussions will take place via email communications. If not finalized, documents (Part IVA and IVB) will be addressed during the next SWGDRUG in-person meeting.

Meeting Summary/Close-out (Scott R. Oulton)

- Sandra E. Rodriguez-Cruz was thanked for organizing the meeting and travel. John W. McIlroy was thanked for taking notes.
- Mr. Oulton thanked everyone on the committee for their hard work and dedication throughout the week. He expressed special thanks to all subcommittee chairs for their leadership and getting so much accomplished during the week.
- Mr. Oulton said that he will be looking into the possibility of having a second meeting later this year. The date for the next core committee meeting will be set at a future time.
- The meeting was adjourned.

Minutes respectfully submitted by John W. McIlroy