

SWGDRUG Meeting Minutes

Chicago, IL

June 26-29, 2023

Core Committee Members (present):

Sandra E. Rodriguez-Cruz, Chair Drug Enforcement Administration (DEA)

Christian C. Matchett, Vice-Chair Clandestine Laboratory Investigating Chemists Association (CLIC)

Jaclyn A. Iera, Secretariat Drug Enforcement Administration (DEA)

Michael Bovens European Network of Forensic Science Institutes (ENFSI)

Richard Laing Health Canada

Adriano Maldaner Iberoamerican Academy of Criminalistics and Forensic Studies (AICEF)

Benjamin Painter Australia New Zealand Forensic Science Society (ANZFSS)

Eric Person California State University

Tiffany A. Ribadeneyra Northeastern Association of Forensic Scientists (NEAFS)

Sandra B. Sachs California Association of the Criminalists (CAC)

Anne L. Slaymaker Drug Enforcement Administration (DEA)

Ruth Smith Michigan State University

Yen Ling Wong United Nations Office on Drugs and Crime (UNODC)

Tiong Whei Angeline Yap Asian Forensic Sciences Network (AFSN)

Core Committee Members (not present):

Jason D. Brewer Federal Bureau of Investigation (FBI)

Guests:

Sally Ho Drug Enforcement Administration (DEA) – Note taker

Jennifer Bonetti Mid-Atlantic Association of Forensic Scientists (MAAFS)

Elizabeth Griffin Midwestern Association of Forensic Scientists (MAFS)

Melissa Hehir Southern Association of Forensic Scientists (SAFS)

Kerry Hogan Northwestern Association of Forensic Scientists (NWAFS)

Benjamin Place National Institute of Standards and Technology (NIST)

David Huang Southwestern Association of Forensic Scientists (SWAFS)

Amanda Shanbaum American Society of Crime Laboratory Directors (ASCLD)

MONDAY, June 26, 2023

Welcome Remarks and Introduction of Guests

- Dr. Anne Slaymaker introduced the North Central Laboratory's Laboratory Director.
- Laboratory Director Melanie Domagala welcomed everyone to the North Central Laboratory for the week.
- SWGDRUG Chair Dr. Sandra Rodriguez-Cruz welcomed everyone and introduced prospective members Benjamin Place (NIST); David Huang (SWAFS), Amanda Shanbaum (ASCLD), Melissa Hehir (SAFS), Jennifer Bonetti (MAAFS), Kerry Hogan (NWAFS) and Elizabeth Griffin (MAFS); and special guest Sally Ho who will be serving as note taker for the week.

Updates from Organization Representatives

- Dr. Angeline Yap provided the updates for Asian Forensic Sciences Network (AFSN). She began with a brief history of AFSN and provided an update of current membership, working groups and recent and future workshops. She summarized the 2020-2022 drug situation in Asia providing data from 12 countries. Methamphetamine is the most commonly abused drug in Asia, followed by cannabis, yaba (containing methamphetamine and caffeine), with the 4th and 5th place alternating between heroin and ecstasy. Dr. Yap also summarized the prevalence of drug abuse by location (country) as well as the different NPS reported in Asia between 2021 and 2022. She then provided an overview of drug trends observed in Singapore; she discussed amounts and types of specific NPS reported.
- Mr. Ben Painter provided an Australia and New Zealand Region update. He began with recent trends observed in the region - most predominantly observed are cannabis, methamphetamine, “fantasy” and to a lesser extent cocaine. He discussed the growing “street benzo” (XANAX bars - clonazepam) trend and some recent nitazene detections, noting the region does not regularly observe fentanyl and is aware of the growing xylazine issue. He briefed the group on recent DrugSAG Activities, regional legislative changes and the associated challenges the forensic community faces as a response to the changes. He provided an update on the CanTEST initiative that has been implemented in the ACT as an example of a method of harm reduction. He provided an update on the Australian court landscape in the forensic realm detailing findings from a recent royal commission.
- Dr. Benjamin Place provided an update from the organic chemical metrology group at NIST. They lead the effort in the development of NIST Standard Reference Materials (SRMs) and Reference Materials for organic and chemical analysis. He provided an overview of non-targeted analysis protocols, described uncertainties analysis of mass spectral matching to inform confidence of identification detailed in publication:
“Development of a Data Analysis Tool to Determine the Measurement Variability of Consensus Mass Spectra.” He provided an update of a NIST initiative to develop an open-source, platform independent analytical database structure for information sharing. He discussed developing a SOP to identify a novel substance - community consensus building for the use of non-targets analysis (NTA) techniques and the reporting of NTA results to transparently communicate methods and data - that will be publicly available.
<https://nontargetedanalysis.org>
He briefed the group with NIST specific updates to include the release of the NIST23 MS library, the status of hemp RM development and provided an update on the Rapid Drug Analysis and Research (RaDART) program.
- Dr. Michael Bovens presented the update from ENFSI Drug Working Group (DWG). Dr. Bovens gave an update on ENFSI membership, and its work products and its resources (repository of best practice documents, a website that assists in naming new compounds, ChemoRe software tool, etc). He provided highlights from the recent ENFSI DWG meeting held in Italy including trends on cannabinoids and semi-synthetic cannabinoids, a published guideline for qNMR analysis for cannabinoids, and updates on forensic research being conducted in the field. He gave an overview of EMCDDA (European Monitoring Centre for Drugs and Drug Addiction), a separate entity with similar goals as ENFSI DWG. He provided a status update of EFSA 2030 - European Forensic Scientific Area, illustrating ENSFI’s vision for the forensic community. He provided a status update to ISO TC 272: ISO 21043 which is expected to be published in 2024.

- Ms. Yen Ling Wong gave an overview on UNODC initiatives regarding quality assurance support to drug testing laboratories. She discussed the international collaborative exercises (ICE) program and provided examples of laboratory performance from over 200 labs. She also introduced a pilot ICE round on structure elucidation of a novel NPS and encouraged participation from all laboratories. She highlighted the latest UNODC publications, resources and tools (UNODC Early Warning Advisory Portals and UN Toolkit on Synthetic Drugs) on drug analysis and provided an update of substances added to the 1961 Single Convention on Narcotic Drugs and 1971 Convention on Psychotropic Substances.
- Dr. Slaymaker provided updates from the Organization of Scientific Area Committees for Forensic Science (OSAC) and American Society for Testing and Materials (ASTM). She provided a snapshot of the OSAC registry: relating to seized drugs - there are 7 published standards with 1 proposed standard - standard guide for testimony in seized drugs analysis. She discussed the ASTM standards in revision, providing specific status updates. She specifically went into E2329 - Standard Practice for Identification of Seized Drugs- discussing revisions to include SWGDRUG recommendations to include category A technique and 2 samples are required to make an identification. She gave an update on new ASTM standards in progress and OSAC standards in development.
- Ms. Tiffany Ribadeneyra provided an update from the northeast region. The region is seeing rampant heroin/fentanyl and an increase in methamphetamine and discussed a recent drug case that was overturned due to the lack of foundation presented regarding the validity/traceability of reference materials used to make identifications.
- Ms. Kerry Hogan provided state specific updates on commonly seen drugs in the Northwest Region. She briefed the group on a new program which tracks live data in the community (Overdose to Action). Informed the group of Oregon Ballot Measure 110 which reclassified personal/non-commercial drug possession offenses from a misdemeanor to a violation.
- Dr. Eric Person discussed the lasting effects of COVID observed in students.
- Ms. Amanda Shanbaum briefed the group about the Chicago and Illinois regions. Overall seized drug submissions are decreasing in Chicago likely due to treatment diversion plans and an increase in harm reduction organizations for prevention.
- Dr. Jaclyn Iera discussed DEA priorities, primarily focused on fentanyl and methamphetamine and the increasing interest in precursor chemicals and new challenges associated with their identification. She also briefed the group on the status of the DEA New Hampshire Laboratory.
- Dr. Rodriguez-Cruz provided an update on DEA's DART project, method standardization, a new characterization project on M30 tablets, and the DEA's investigation of xylazine. Dr. Rodriguez-Cruz also provided a DEA-Method Development and Technology Transfer (MDTT) group update. The group is in the beginning stages of developing a super method "standardized method" with the goal of it being implemented by other laboratory systems. They envision it will be a general screen method between 15 and 20 minutes and are looking into commercially available columns. DEA will be conducting the validation and is looking for ruggedness partners. Data will be uploaded onto NFLIS.
- Mr. Christian Matchett announced that CLIC is formally represented on SWGDRUG. He provided CLIC updates on future meeting locations and discussed SWGDRUGs perspective on handheld devices.

- Mr. Richard Laing provided an update from Canada. He discussed the challenges to standardization, as well as challenges associated with cannabis analysis. Canada has an opioid crisis and as a result they provide significant harm reduction services as well as provide analytical services to the drug checking community. He also discussed challenges associated with verifying standards from commercial sources and initiated the creation of SD8.
- Dr. Adriano Maldaner reported that Brazil has developed a chemical profiling website that enables sharing chemical profiling results with reports with frequent usage from law enforcement counterparts. He reported there have no seizures of heroin/fentanyl observed and discussed challenges associated with new technology. The Brazilian Federal Police has a collaboration with a university for NIR method development.
- Mr. David Huang provided an overview of US Postal Inspection Services (USPIS) to include FLS (Forensic Laboratory Services) and provided an overview of the FY2022 Drugs analyzed.
- Ms. Elizabeth Griffin provided an Indiana cannabis/marijuana update.
- Ms. Jennifer Bonetti provided a MAAFS update on recent workshops/meetings, trends observed in Mid-Atlantic region and discussed how in Virginia, fentanyl can be charged as a “weapon of terrorism”. She also discussed recent training provided for judges and attorneys regarding uncertainty measurement and hypergeometric sampling.
- Dr. Rodriguez-Cruz and Mr. Matchett closed the meeting with closing remarks and briefly touched on goals/agenda for tomorrow.

TUESDAY, June 27, 2023

- Mr. Matchett opened the meeting with administrative items.
- The group discussed definitions proposed for incorporation into Annex A. The group accepted proposed definitions which would harmonize SWGDRUG recommendations with other standards (ASTM/OSAC/UNODC) and collaboratively worked together to create SWGDRUG specific definitions to meet the document's needs.
- The group had a virtual meeting with NIST representatives Jack Prothero and Will Guthrie. NIST presented a hypergeometric sampling application in development that labs could employ; they anticipated being able to share the source code. Jack Prothero gave a demonstration of the application and discussed the capabilities that the user would have regarding population inferences and confidence intervals. Future work on the application would include an update to incorporate the uncertainty associated with the population estimation.
- The group broke out into subcommittees for the rest of the day:
 - Part IVB - Sandra Sachs, Eric Person, Anne Slaymaker
 - Part IIIA - Tiffany Ribadeneyra, Michael Bovens, Jennifer Bonetti
 - Part IIIB – Christian Matchett, David Huang, Elizabeth Griffin
 - Portable instrument language
 - Part IVA (Assessment of Reference Materials) - Yen Ling Wong, Benjamin Place, Angeline Yap, Sally Ho, Richard Laing

- Training outline gap analysis - Melissa Hehir, Adriano Maldaner, Kerry Hogan, Ruth Smith
- SD-7 - Benjamin Painter, Amanda Shanbaum
- Outreach - Angeline Yap
- Website – Jaclyn Iera

WEDNESDAY, June 28, 2023

- Dr. Rodriguez-Cruz opened the day's agenda.
- The different committees gave a recap of what they discussed/progress from the previous day.
- Ms. Ribadeneyra and Dr. Bovens discussed IIIA.3 Figure 2 flow chart amendments (sampling scheme flowchart) - with the introduction of sequential sampling with adjusting inferences based on observed positives and negatives with incorporating the previously discussed tool from NIST
- Mr. Matchett, Ms. Griffin and Mr. Huang - IIIB - discussed rearrangement of method validation verbiage.
- Ms. Shanbaum and Mr. Painter provided an update on SD-7 update which will include an example of structural elucidation.
- The committee discussed Part IVA, the assessment of reference materials. A proposal was put forward to create SD-8, a flowchart for structural elucidation (SWGDRUG perspective) with examples of limitations/capabilities.
 - The committee agreed – proceed with the creation of SD-8.
- Dr. Yap presented an update on outreach focusing on 2 aspects: raising the visibility of SWGDRUG (twitter) and planning webinars to teach people how to read and understand the documents. She discussed extra webinar topics as well as logistics of scheduling and recording.
- Ms. Hehir, Dr. Maldaner, Ms. Hogan, and Dr. Smith – presented updates on training and minimum requirements/qualifications - lecture courses including instrumental and quantitative courses providing examples of what an analyst should be able to do.
- The committee subsequently broke out into subgroups for further discussion.
- 3:30 pm the committee reconvenes for further discussion.

THURSDAY, June 28, 2023

- The committee toured the North Central Laboratory led by Dr. Slaymaker.
- Dr. Rodriguez-Cruz opened the meeting with the agenda.
- The sub-committees each provided a progress update.

- The committee discussed proposed language of field portable instruments. Dr. Person recommends a position statement on portable instruments; Dr. Yap supports this motion and reiterates that the SWGDRUG recommendations are for practitioners.
- A post meeting item will be to include a disclaimer for website that SWGDRUG doesn't endorse any technology/vendor etc.
- Dr. Person - proposes a motion that the position of SWGDRUG regarding field portable and miniature instruments is captured as follows:

*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.*

- Ms. Ribadeneyra seconds the motion.
- Eligible SWGDRUG members - unanimous votes in favor, no opposing votes
- The group discussed edits to:
 - SWGDRUG Position on Portable Instruments
 - Part II - Education and Training
 - Part IIIA - Sampling and Figure 2 (pending editorial in figure)
 - Part IIIB – language on using validated methods
 - Remove SD-2
 - Part IVB – Method Validation
 - Annex A Definitions
- Mr. Laing - makes a motion to accept as discussed, pending editorial review, release for public comment of all above
 - Dr. Person seconds the motion
 - No further discussion by the group, no amendments
 - All members voted in agreement, no dissent
- Dr. Person - makes a motion to remove the PDF for SD-2 from the SWGDRUG website and replace with text indicating that is in revision
 - Mr. Laing seconds the motion
 - No further discussion from the group
 - 11 in favor, 2 opposed, No abstains
 - Motion passes

Meeting Conclusion and Closing Remarks

- Future work and work between meetings:
 - SD-7 and formatting changes

- SD-8 update - work out the strengths/weaknesses and comments on techniques on how they can be applied towards structural elucidation; the committee will be asked to look at overall theme of document and provide feedback (capture theme and mission)
- Social outreach – Ms. Ribadeneyra has volunteered to be assist with the Twitter account
- Dr. Rodriguez-Cruz ended the meeting with closing remarks and expressed gratitude for Mr. Laing who announced his retirement and has served on SWGDRUG since 1998. She declared the meeting adjourned.

Minutes submitted respectfully by Dr. Sally Ho.