

# ***Scientific Working Group on DNA Analysis Methods (SWGDM) January 2018 Report***

*January 9-11, 2018*

*Woodbridge, Virginia*

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## **I. Agenda:**

Please see Attachment 1.

## **II. Meeting Synopsis:**

**Tuesday, January 9, 2018**

The SWGDAM Chair, Mr. Anthony Onorato, acknowledged the dedicated efforts of Kate Henze for the travel arrangements for the SWGDAM attendees and reviewed the meeting agenda. The Chair introduced the following new guests for the January meeting: Chris Askew, Jennifer Breaux, George Li, Justin Maxwell and Barbara McCarty. The Chair also congratulated the following on their appointment as SWGDAM members: Kristine Kadash, Christie Smith and Melissa Suddeth. The Chair recognized Dr. Jo Anne Bright and Dr. “Peg” Schwartz for their dedicated service to the Y-STR and QA Committees, respectively.

### Technical Session: Verbal Equivalent Working Group Briefing

Jerrilyn Conway from the Federal Bureau of Investigation (FBI) Laboratory provided an introduction on the Verbal Scale for Likelihood Ratios, reviewing various scales currently in use, as well as those laboratories that extend their scales for noninformative and laboratories that support the use of an identification level (at a trillion and above based on their source threshold).

Tamyra Moretti from the FBI Laboratory explained that there is a lot of variance among laboratories’ verbal scales. Dr. Moretti explained that the Quality Assurance Standard 11.2.6 requires that reports should include a quantitative and qualitative statement explaining the inclusions. She noted that the main criticism is that a verbal equivalent may be arbitrary. Dr. Moretti described the proposed SWGDAM scale that includes uninformative, limited, moderate, strong and very strong; similar to the scale used by the European Network of Forensic Scientists.

Shawn Montpetit with the San Diego (CA) Police Department reviewed the recommendations from the Verbal Equivalent Working Group. There was also a discussion of the various thresholds being used by laboratories. The Working Group will take these discussions and comments under consideration and make revisions to their recommendations, as appropriate.

Walther Parsons, President of the International Society for Forensic Genetics (ISFG), provided an update on their annual meeting held in Seoul over the summer, including the status of the various Working Groups and the Canine DNA Profiling Group. Dr. Parsons reviewed the impact of the *Forensic Science International: Genetics* publication and the revised guidelines for the publication of genetic population data. Dr. Parsons described a series of papers intended to make sense of scientific disciplines (including one on forensic genetics) available at [www.isfg.org](http://www.isfg.org). Also available at the ISFG web site will be a searchable archive of “Advances in Haemogenetics”; details on the 28<sup>th</sup> Congress of ISFG meeting to be held in Prague in September 2019; and fellowships and membership information.

#### Review of the DRAFT Quality Assurance Standards for Forensic DNA Testing Laboratories (Forensic QAS)

Jocelyn Carlson, Chair of the SWGDAM Quality Assurance (QA) Committee, reviewed revisions to the Forensic QAS made in response to public comments. Proposed revisions to the following were discussed: effective date, scope, definitions, Standard 3, Standard 5, Standard 6, Standard 8, Standard 9, Standard 12, Standard 13, Standard 14, Standard 15, and Standard 17.

#### Update Session

Peter Vallone of the National Institute of Standards and Technology (NIST) Applied Genetics Group provided an update on their activities. Dr. Vallone explained that SRM 2391d is at the point where it can now be bottled and NIST has also done mito sequencing and are hoping to have mito and SNPs information included. SRM 2372a is the successor to SRM 2372 and is almost available. Measurements are now being made with digital PCR (dPCR). NIST revised the allele frequencies publication at STRbase; the previous tables have been taken down. Dr. Vallone noted that NIST has underway sequencing projects of 1,036 population samples on Illumina. Recent guest researchers looking at inhibition on ForenSeq. STRbase 2.0 is in the first round of development and will include fact sheets with a beta site in 1 month and it will include variant allele reporting. Dr. Vallone introduced Mike Coble of NIST who announced that he will be leaving NIST to go to the University of North Texas Health Science Center where he will have an opportunity to teach.

John Butler, NIST Fellow and Special Assistant to the Director of Forensic Science at NIST, provided an update on recent activities of the OSAC Biology/DNA Scientific Area Committee. Dr. Butler described existing DNA guidance documents including SWGDAM documents, ENFSI documents, UK Forensic Science Regulator – all of which have direct links to the documents. For OSAC, the goal is to generate a registry of approved standards that accrediting bodies can use to audit laboratories. The OSAC newsletter is now a quarterly publication available at <https://www.nist.gov/topics/forensic-science/organization-scientific-area-committees-osac/osac-newsroom/osac-newsletter>. Dr. Butler explained the process for sharing the OSAC documents for comments and input. After comments are solicited and receive SAC approval, draft documents are posted on the OSAC website and sent to the American Academy of Forensic Sciences Standards Board (ASB) for review. The OSAC Biology holds regular conference calls and the next public meeting is in February, 2018 as part of AAFS Annual Meeting.

The Chair announced that the July 2018 SWGDAM meeting will be held on July 10-12, 2018.

### **Wednesday, January 10, 2018**

Committee meetings were held in the morning and revisions to the DRAFT Forensic QAS were provided to attendees following lunch for individual review.

#### Review of the DRAFT Quality Assurance Standards for Forensic DNA Testing Laboratories (Forensic QAS)

Jocelyn Carlson, QA Committee Chair reviewed and discussed the final revisions with the attendees.

#### Wednesday Evening Round Table

A round table discussion was held in the evening and the following topics were presented and/or discussed: DNA mixture review, resolution of an unidentified human remains case through recognition of Type II DNA damage, ParaDNA validation, single base allele variants in mixtures, mixtures, y exoneration and lessons learned on mandatory SAECK testing.

### **Thursday, January 11, 2018**

Minh Nguyen with the National Institute of Justice' Office of Investigative and Forensic Sciences presented an update on Forensic Biology and DNA Research and Development. Ms. Nguyen reviewed the FY 2017 funded Research and Development projects, the 2017 Technology Working Group and FY2018 solicitations. The FY2017 Research and

Development awards are available at <https://www.nij.gov/funding/awards/pages/awards-list.aspx?solicitationid=4795>. The FY2018 anticipated funding opportunities are available at <https://www.nij.gov/funding/awards/pages/awards-list.aspx?solicitationid=4795>.

Jack Ballantyne at the National Center for Forensic Science at the University of Central Florida presented on the National U.S. Y-STR Database. Dr. Ballantyne explained the history and original goals of the Y-STR database and consortium. The database is available at [www.usystrdatabase.org](http://www.usystrdatabase.org). Dr. Ballantyne noted that almost 16,000 profiles have been contributed this past year but that the database growth has slowed. The database averages approximately 1,500 searches each month. The database offers five mixture interpretation/deconvolution tools and users can select the tool that is most appropriate for their needs. The database has a sample submission section and appeals are made for samples and data at all relevant meetings, presentations, etc. Dr. Ballantyne reviewed the future goals of the database as it is a national resource. They will continue to solicit data and samples from forensic laboratories and to incorporate the suggestions/comments from users, in addition to developing a succession plan for the database.

#### Review of the DRAFT Quality Assurance Standards for Forensic DNA Testing Laboratories (Forensic QAS)

Jocelyn Carlson, QA Committee Chair resumed the review of the Forensic QAS and questions from the attendees were discussed. At the conclusion of the discussion, a motion was made, and seconded, to approve the revisions to the Forensic QAS. The revisions were unanimously approved by the SWGDAM membership. There as further discussion on how to get this information on the revised Forensic QAS out to the relevant DNA community. For the Forensic QAs, the Chair explained that these revisions are subject to review by the Director of the Federal Bureau of Investigation before issuance.

The Chair introduced Chris Carney, Chair of the Committee of Style and Arrangement on Databasing to review his Committee's work. Mr. Carney explained that his Committee has proposed revisions to the Database QAS which covered the following: scope, definitions, Standard 3, Standard 5, Standard 7, Standard 8, Standard 9, Standard 11, Standard 12, Standard 13, Standard 14, Standard 15 and Standard 17. The proposed revisions will be distributed to the membership and invited guests for the 30 day review period and any comments will be provided to the Committee for consideration.

#### Update Session

George Li, Rapid DNA Program Manager in the FBI's CODIS Unit provided an update on Rapid DNA activities. Mr. Li stated that additional details on the capabilities for Rapid DNA provided in the new software - CODIS 8.0 - will be provided to CODIS

laboratories. Mr. Li explained that a Rapid DNA booking station pilot project is in the planning stage and will include local, state and federal representatives from law enforcement, CODIS laboratories and the FBI Laboratory and Criminal Justice Information Services (CJIS) Divisions. The Rapid DNA Requirements document is available on the FBI's CODIS web site (<https://www.fbi.gov/file-repository/rdna-requirements-9-20-17-final.pdf/view>) and laboratories planning to implement Rapid DNA should be working towards compliance with these requirements. Questions regarding Rapid DNA can be directed to [Rapiddna@fbi.gov](mailto:Rapiddna@fbi.gov) and please check the website under Rapid DNA for updates.

Lisa Schiermeier-Wood, Chair of the SWGDAM Laboratory Operations Committee, explained that the Committee was tasked with drafting a clarification document to describe proficiency testing requirements with respect to Y-screening. Ms. Schiermeier-Wood clarified that Y-screening was covered as a DNA method under the Quality Assurance Standards. The document is currently under development.

Joce Carlson, QA Committee Chair, informed attendees that the Committee continues its work on the Audit Discussion document. Ms. Carlson noted that she may be sending out sections of the Discussion document for review prior to the July 2018 SWGDAM meeting.

**III. Attendees:**

Please see Attachment 2.

**IV. Next Meeting:**

The next meeting will be held July 10-12, 2018.

Attachment 1 - Final Agenda



SCIENTIFIC WORKING GROUP

DNA ANALYSIS METHODS

## SWGDM REGULAR MEETING

January 9 - 11, 2018

### AGENDA

#### Monday, January 8, 2018

##### SPECIAL COMMITTEE SESSION

9:00 AM - 5:00 PM      QA Committee

9:00 AM – 5:00 PM      Committee on Style and Arrangement – Databasing QAS

#### Tuesday, January 9, 2018

8:30 AM      Welcome – SWGDM Chair

##### TECHNICAL SESSION: VERBAL EQUIVALENT WORKING GROUP BRIEFING

9:00 AM      Survey of Existing Verbal Equivalent Scales – Jerrilyn Conway

9:30 AM      Practical Considerations for Using Inconclusive Zones – Tamyra Moretti

10:00 AM      Break

10:15 AM      Open Discussion of Working Group topics – Shawn Montpetit

12:00 PM      LUNCH

##### QAS REVIEW SESSION: COMMITTEE OF THE WHOLE

1:15 PM      ISFG Update – Walther Parsons

2:00 PM      Discussion of the Forensic QAS Public Comments – Jocelyn Carlson

3:00 PM      BREAK

3:15 PM      Discussion of Forensic QAS Public Comments – Jocelyn Carlson

4:00 PM      Update Session: NIST – Pete Vallone

4:30 PM      Update Session: Biology/DNA SAC – John Butler

5:00 PM      ADJOURNMENT



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**Wednesday, January 10, 2018**

COMMITTEE BREAKOUT SESSIONS

8:30 AM Committee Break-Out Sessions or Committee of the Whole Reviews or Committee Final Reports and Final Approval Votes (as needed)

12:00 PM LUNCH

QAS REVIEW SESSION: INDIVIDUAL REVIEW

*SWGDM participants will be given time to review the changes proposed to the QAS by the QA Committee based on the public comments received by SWGDAM*

1:15 PM Independent Study

3:15 PM BREAK

QAS REVIEW SESSION: COMMITTEE OF THE WHOLE

3:15 PM Open Discussion of the Forensic QAS – Jocelyn Carlson

5:00 PM ADJOURNMENT

ROUND TABLE SESSION

Moderator: Russell Vossbrink, SWGDAM [Vice Chair](#)

6:00 PM TBD

SPECIAL COMMITTEE BREAKOUT SESSION

6:00 PM QA Committee

SCIENTIFIC WORKING GROUP



DNA ANALYSIS METHODS

**Thursday, January 11, 2018**

8:30 AM NIJ Update – Minh Nguyen

9:00 AM US Y-STR Database – Jack Ballantyne

**SPECIAL COMMITTEE BREAKOUT SESSION**

9:00 AM – 5:00 PM NGS Working Group

**QAS REVIEW SESSION: COMMITTEE OF THE WHOLE REVIEW**

9:30 AM Review of the Forensic QAS – Jocelyn Carlson

10:45 AM Break

11:15 AM Review of the ~~Databasing~~ QAS – Chris Carney

12:00 PM LUNCH

1:15 PM Rapid DNA Update – George Li

1:30 PM Laboratory Operations Committee Update – Lisa Schiermeier-Wood

1:45 PM Closing Remarks – SWGDAM Chair

2:00 PM ADJOURNMENT



Attachment 2 - Attendees

**SWGDM January 2018 Meeting  
January 9-11, 2018  
Attendees**

SWGDM Chair

Anthony Onorato

SWGDM Executive Board

Chris Carney

Eugene Lien

Amy McGuckian

Shawn Montpetit

John Tonkyn

Russell Vossbrink

Dawn Herkenham

SWGDM Attendees

Meg Aceves

Chris Askew

Jack Ballantyne

Suzanne Barritt-Ross

Todd Bille

Jennifer Breaux

John Butler

Thomas Callaghan

Jocelyn Carlson

Amber Carr

Michael Coble

Jerrilyn Conway

Brenda Danosky

Seth Faith

Connie Fisher

Russell Gettig

Katherine Butler Gettings

Ann Marie Gross

Lisa Grossweiler

Douglas Hares

Brian Harmon

Bruce Heidebrecht

Bill Hudlow

Deedra Hughes

Ted Hunt

Jodi Irwin

Clark Jaw

Elizabeth Johnson

Kristy Kadash

Marla Kaplan

Susannah Kehl

Sander Kneppers

Jason Kokoszka

Brandon Letts

George Li

Beth Ann Marne

Charla Marshall

Justin Maxwell

Barbara McCarty

Scott McWilliams

Gary Molina

Ruth Montgomery

Lilly Moreno

Tamyra Moretti

Minh Nguyen

Mary Lou Nicholson

Jeffrey Nye

Darrel Oubre

Walther Parson

Dixie Peters

John Planz

Evelyn Ridgley

Juliet Rolando

Lisa Schiermeier-Wood

Taylor Scott

Christie Smith

Jenifer Smith

Melissa Suddeth

Joel Sutton

Peter Vallone

Jeanette Wallin

Ray Wickenheiser

Richard Wilson

Tim Zolandz