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Introductions
New Participants

- 7 new participants have been invited to the January 2020 SWGDAM Regular Meeting. SWGDAM would like to welcome the following individuals and thank their respective home agencies for their willingness to support our efforts:
  
  • Lauren Lu, Michigan State Police – Laboratory Operations Committee
  • Sarah Noel, Laboratoire de sciences judiciaires et de médecine légale, Ministry of Public Safety (Quebec) – Autosomal STR Committee
  • Erica Romsos, National Institute of Standards and Technology – Body Fluid identification Working Group
  • Alyson Saadi, Louisiana State Police – Quality Assurance Committee
  • Anne Marie Schubert, Sacramento County District Attorney’s Office – Committee of Correspondence on Forensic Genealogy
  • Phillip Simmer, Louisiana State Police – Rapid-DNA Pilot
  • Carl Sobieralski, Indiana State Police – Organization of Scientific Area Committees (OSAC) Liaison
New Members

– 4 new members have been appointed by the SWGDAM Chair following their recommendation by the Membership Committee (Section II.C.31). Congratulations to:

• Marla Kaplan – Oregon State Police
• Charla Marshall – Armed Forces DNA Identification Laboratory
• Justin Maxwell – Colorado Bureau of Investigation
• Ruth Montgomery – Missouri State Highway Patrol

– SWGDAM would like to thank the home agencies of these individuals for their continued support of its critical work.
Memberships Update

– SWGDAM would like to thank Dr. John Tonkyn for his over 15 years of dedicated service and wish him well as he moves from the California Department of Justice to the International Commission on Missing Persons.

– John, congratulations on your new role and SWGDAM wishes nothing but the best for you and your family.
SWGDAM would like to thank Meg Aceves of the California Department of Justice for her work on behalf of SWGDAM.

• “I really appreciate the opportunity to have worked with so many brilliant minds to elevate our profession.”
Agenda
January 2020 Meeting

- 102 invitations had been extended to 8 international, 35 domestic federal, and 59 domestic state and local invitees.

- The Casework Expert System Working Group, Committee of Correspondence on Forensic Genealogy, and Rapid-DNA Committee will meet on Monday, January 6th prior to the start of the SWGDAM Regular Meeting.

- The meeting will include a Committee of the Whole Sessions to review the proposed *FBI Quality Assurance Standards for the Operation of Rapid DNA Systems by Law Enforcement Agencies in the Booking Environment*.

- The Technical Session will be held on Tuesday to discuss both Rapid-DNA Technology and Investigative Genetic Genealogy.

- A full day of Committee Breakout Sessions will be held on Wednesday.

- The Roundtable Session will be held Wednesday evening and Update Sessions on Thursday.
About Us
- Recommend revisions, as necessary, to the Quality Assurance Standards for Forensic DNA Testing Laboratories and the Quality Assurance Standards for DNA Databasing Laboratories.

- Serve as a forum to discuss, share, and evaluate forensic biology methods, protocols, training, and research to enhance forensic biology services.

- Recommend and conduct research to develop and/or validate forensic biology methods (Section I).
Organization

– Chair: Anthony J. Onorato, FBI Laboratory
– Vice Chair: Russell Vossbrink, Arizona DPS
– Executive Board: Chris Carney, Eugene Lien, Amy McGuckian, Shawn Montpetit, and vacant
– Executive Secretary: Dawn Herkenham
– Members are technical leaders, CODIS Administrators, or forensic scientists from local, state and federal crime laboratories
  • 35 Regular Members
  • 3 year membership term(s)
– Two regular meetings per year in January and July
– Invited Guests participate in meetings
  • Invited Guests have full participatory/voting privileges in Committee and Committee of the Whole Sessions
  • Invited Guests do not vote when the SWGDAM Membership considers documents for final approval (SWGDAM Bylaws, Section II.D)
SWGDAM Members

- Suzie Barritt-Ross
- Angelo Della Manna
- Thomas Callaghan
- Chris Carney
- Russell Gettig
- Ann Marie Gross
- Bruce Heidebrecht
- Deedra Hughes
- Elizabeth Johnson
- Kristine Kadash
- Marla Kaplan
- Susannah Kehl
- Jason Kokoszka
- Eugene Lien
- Beth Ann Marne
- Amy McGuckian
- Scott McWilliams
- Jeff Nye
- Charla Marshall
- Justin Maxwell
- Gary Molina
- Ruth Montgomery
- Shawn Montpetit
- Tamyra Moretti
- Steven Myers
- Anthony Onorato
- John Planz
- Dixie Peters
- Juliet Rolando
- Lisa Schiermeier-Wood
- Christie Smith
- Jenifer Smith
- Melissa Suddeth
- Joel Sutton
- Russell Vossbrink
## Past Participation

<table>
<thead>
<tr>
<th>Month</th>
<th>Participants</th>
<th>International</th>
<th>Domestic Federal</th>
<th>State and Local</th>
</tr>
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<tbody>
<tr>
<td>July 2019</td>
<td>81</td>
<td>4</td>
<td>29</td>
<td>48</td>
</tr>
<tr>
<td>January 2019</td>
<td>Cancelled</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 2018</td>
<td>73</td>
<td>6</td>
<td>27</td>
<td>40</td>
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<tr>
<td>January 2018</td>
<td>72</td>
<td>4</td>
<td>30</td>
<td>38</td>
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<tr>
<td>July 2017</td>
<td>66</td>
<td>3</td>
<td>26</td>
<td>37</td>
</tr>
</tbody>
</table>
2018 Survey

SWGDAM Participant Agency Affiliation

<table>
<thead>
<tr>
<th>Type of Organization</th>
<th>Federal</th>
<th>State</th>
<th>Local</th>
<th>Academia</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15</td>
<td>21</td>
<td>6</td>
<td>4</td>
<td>1 – Not-for-profit</td>
</tr>
</tbody>
</table>

![Pie chart showing the distribution of organizations by type: Federal, State, Local, Academia, Other. The Federal sector dominates.]
### 2018 Survey

#### SWGDAM Participant Current Job Title

<table>
<thead>
<tr>
<th>Current Job Title</th>
<th>Laboratory Director</th>
<th>Quality Manager</th>
<th>Technical Leader</th>
<th>CODIS Administrator</th>
<th>Forensic Scientist/Analyst</th>
<th>Professor</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>1</td>
<td>14</td>
<td>6</td>
<td>8</td>
<td>1</td>
<td>8– Supervisor 4 – Program Manager 3 – Associate Director 1 – Research Leader 1-Associate Professor 1-Unit Chief 1-Auditor</td>
</tr>
</tbody>
</table>

![Current Job Title Chart]
2018 Survey

SWGDAM Participant DNA Laboratory Experience

<table>
<thead>
<tr>
<th>Years of experience at a laboratory conducting forensic DNA testing</th>
<th>None</th>
<th>1-4 years</th>
<th>5-9 years</th>
<th>10-14 years</th>
<th>15-19 years</th>
<th>&gt; 20 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>16</td>
<td>23</td>
<td></td>
</tr>
</tbody>
</table>

Years of Experience conducting forensic DNA testing

- 1-4 years
- 5-9 years
- 10-14 years
- 15-19 years
- >20 years
<table>
<thead>
<tr>
<th>Currently qualified to conduct forensic DNA casework</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21</td>
<td>26</td>
</tr>
</tbody>
</table>

Currently qualified to conduct forensic DNA casework
## 2018 Survey

### SWGDAM Participant Percent Casework

<table>
<thead>
<tr>
<th>% of time spent performing casework (testing, preparing reports, reviews, etc.)</th>
<th>0%</th>
<th>1-25%</th>
<th>26-50%</th>
<th>50-75%</th>
<th>76-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20</td>
<td>14</td>
<td>4</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

% of time spent performing casework (testing, preparing report, reviews, etc)
## 2018 Survey

### SWGDAM Participant Experience by Technique

<table>
<thead>
<tr>
<th>Years of experience in</th>
<th>Less than 1 year</th>
<th>1-4 years</th>
<th>5-9 years</th>
<th>10-14 years</th>
<th>15-19 years</th>
<th>&gt;20 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological screening</td>
<td>7</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>Nuclear DNA</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>Y-STRs</td>
<td>15</td>
<td>7</td>
<td>2</td>
<td>7</td>
<td>5</td>
<td>1</td>
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<tr>
<td>mtDNA</td>
<td>35</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>NGS</td>
<td>38</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Years of Experience in Biological Screening

- **Less than 1 year**: 7
- **1-4 years**: 4
- **5-9 years**: 4
- **10-14 years**: 2
- **15-19 years**: 17
- **>20 years**: 12
2018 Survey

Years of Experience in Nuclear DNA

Years of Experience in Y-STRs
2018 Survey

Years of Experience in MtDNA

- Less than 1 year
- 1-4 years
- 5-9 years
- 10-14 years
- 15-19 years
- >20 years

Years of Experience in NGS

- Less than 1 year
- 1-4 years
- 5-9 years
Standing Committees

– Autosomal STR Interpretation
– CODIS
– Laboratory Operations
– Lineage Marker
– Next Generation Sequencing
– Quality Assurance
– Rapid DNA
Working Groups

– Body Fluid Identification Working Group

– Forensic DNA Expert System Working Group
Joint Collaborations

– Joint NIJ/SWGDAM DNA Efficiency Improvement Group

– Joint OSAC/SWGDAM DNA Process Mapping Group
Committee of Correspondence

– Forensic Genetic Genealogy
  – Representatives from SWGDAM, the European Network of Forensic Science Institutes (ENFSI), the Organization of Scientific Area Committees (OSAC) Biology/DNA Scientific Area Committee (Biology/DNA-SAC), and other experts in Forensic Genealogy
  – Drafting an overview of Investigative Genetic Genealogy
  – Delivered a Technical Session on the topic of Forensic Genealogy as a part of the July 9-11, 2019 Regular SWGDAM Meeting.
    – Recommend what, if any, future work SWGDAM should undertake on Forensic Genealogy.
Meetings
Future Meetings

• Two 2020 Regular SWGDAM Meetings
  – January 7-9, 2020
  – July 7-9, 2020
  – SWGDAM Update: November, 2020 (FBI National Technical Leader Summit)

• Two 2021 Regular SWGDAM Meetings
  – January 12-14, 2021
  – July 13-15, 2021
  – SWGDAM Update: November, 2021 (FBI National Technical Leader Summit)
• The new 2020 FBI Quality Assurance Standards were reviewed with the DNA Technical Leaders and other attendees at the SWGDAM Update.

• As necessary, future SWGDAM Updates will be structured similarly to solicit input from DNA Technical Leaders into SWGDAM guidance documents under development.

• The SWGDAM EB continues to emphasize community outreach opportunities such as these to increase information exchange and transparency.
Past Meeting - July 2019

- 81 participants with 4 international, 29 domestic federal, and 48 domestic state and local attendees.
- The Casework Expert System Working Group, Committee of Correspondence on Forensic Genealogy, and Rapid-DNA Pilot Group met in special sessions prior to the start of the Regular Meeting.
- The meeting included Committee of the Whole Sessions to approve the new QAS Audit Guide and to review the OSAC/SWGDAM DNA Process Map.
- A Technical Session was held to discuss Forensic Genetic Genealogy and to receive a report from the Committee of Correspondence on Forensic Genealogy.
- A full day of Committee Breakout Sessions was held.
- Update and Roundtable Sessions were held.
13 new participants were invited to the July 2019 SWGDAM Regular Meeting. SWGDAM would like to welcome the following individuals and thank their respective home agencies for their willingness to support our efforts:

- Blaine Bettinger, The Genetic Genealogist, LLC – Committee of Correspondence on Forensic Genealogy
- Andrea Borchardt, National Institute of Justice – NIJ Liaison
- Dorothy Catella, Oakland County (MI) Sheriff's Office – QA Committee
- Eric Duvall, Denver Police Department – Casework Expert System Working Group
- Malia Fullerton, University of Washington – Committee of Correspondence on Forensic Genealogy
- Christi Guerrini, Baylor College of Medicine – Committee of Correspondence on Forensic Genealogy
- Jessica Hanna, Kansas City Police Department Crime Laboratory – Casework Expert System Working Group
- Vanessa Nelson, Texas Department of Public Safety – Autosomal STR Committee
- Lori Napolitano, Florida Department of Law Enforcement – Committee of Correspondence on Forensic Genealogy
- Chris Piwonka, Texas Department of Public Safety – Rapid-DNA Pilot
- Peter Schneider, Institute of Legal Medicine Cologne – Committee of Correspondence on Forensic Genealogy
- Susan Welti, Washington DC Department of Forensic Sciences – NGS Working Group
- Janaki Vaidyanathan, LA State Police – Rapid-DNA Pilot
Past Meeting - Jan 2019

• MEETING CANCELLED due to a United States Federal Government shutdown that interrupted Fiscal Year 2019 FBI funding.

• 88 invitations had been extended to 7 international, 34 domestic federal, and 47 domestic state and local invitees.

• The meeting was scheduled to have included Committee of the Whole Sessions
  • To receive reports by the NGS Working Group on the Next Generation Sequencing-specific (NGS) additions to the SWGDAM Interpretation Guidelines for Mitochondrial DNA Analysis by Forensic DNA Testing Laboratories and the Addendum to the SWGDAM Interpretation Guidelines for Autosomal STR Typing by Forensic DNA Testing Laboratories performing Next Generation Sequencing.
  • To receive the report by the QA Committee on the QAS Audit Guide that will supplement the proposed revisions to the 2011 FBI Forensic DNA Quality Assurance Standards (QAS) and 2011 Databasing QAS Audit Documents.

• The Technical Session was to have discussed Forensic Genetic Genealogy.

• A full day of Committee Breakout Sessions were to have been held as well as Update and Roundtable Sessions.
• Held in Woodbridge, VA on July 10-12, 2018.

• 73 participants with 6 international, 27 domestic federal, and 40 domestic state and local attendees.

• Both the QA Committee and Next Generation Working Group met in special sessions prior to the start of the Regular Meeting.

• The meeting included Committee of the Whole Sessions to develop the QAS Audit Guide that will supplement the proposed revisions to the 2011 FBI Forensic DNA Quality Assurance Standards (QAS) and 2011 Databasing QAS Audit Documents.

• A Technical Session was held to discuss Lineage Marker Testing and the proposed revisions to the SWGDAM Interpretation Guidelines for Y-Chromosome STR Testing.

• A full day of Committee Breakout Sessions was held.

• Update and Roundtable Sessions were held.
Recent Business
Outreach

• QA Committee Chair Jocelyn Carlson reviewed the new 2020 FBI Quality Assurance Standards with the DNA Technical Leaders and other attendees at the SWGDAM Update at the FBI DNA Technical Leader Summit held in conjunction with the 2019 CODIS Meeting in Norman, OK (November 2019).

• QA Committee Chair Jocelyn Carlson presented on "The Next QAS: An Overview of Revisions to the DNA Quality Assurance Standards" at the Southwestern Association of Forensic Science in Austin, TX (October 2019).

• QA Committee members Jocelyn Carlson, Kristine Kadash, Eugene Lien, and Amy McGuckian presented a workshop entitled "The Revised FBI Quality Assurance Standards for Forensic DNA Typing and Forensic Databasing Laboratories – What’s Changed?" at the International Symposium on Human Identification (ISHI) in Palm Springs, CA (September 2019).

• Kristine Kadash presented on the activities of SWGDAM at a Thermo Fisher Scientific Forensic Genetics – HID Roadshow 2019 in Denver, CO (September 2019).
• QA Committee Chair Jocelyn Carlson has engaged with the FBI’s CODIS Unit to assist the development of the Quality Assurance Standard (QAS) Auditor Computer Based Training (CBT).

• Douglas Hares provided a SWGDAM Update at the European Network of Forensic Science Institutes’ (ENFSI) annual meeting (April 2019).

• SWGDAM Vice Chair Russell Vossbrink continued to participate on the monthly conference call of the Biology/DNA Subject Area Committee (SAC) of the Organization of Scientific Area Committees (OSAC).

• SWGDAM forwarded its proposed changes to the 2011 Forensic and Databasing Quality Assurance Standards (QAS) together with their corresponding QAS Audit Documents to the FBI for its consideration and approval (March 2019).

• SWGDAM forwarded its proposed Standards for the Operation of Rapid DNA Systems by Law Enforcement Agencies in the Booking Environment to the FBI for use in its upcoming pilot study (March 2019).
SWGDAM has empaneled a Body Fluid ID Working Group.

This working group has been tasked to review 1) the current state of forensic serological testing, 2) the next generation of body fluid testing technology, 3) the potential operational value of conventional and future serological testing, 4) the potential integration of both current and future laboratory workflows, and 5) the use of screening techniques to streamline general workflows.

Participants include: Marla Kaplan (Chair), Jason Kokoszka (Vice Chair), Lilly Moreno, Gary Shutler, Evelyn Ridgley, Ray Wickenheiser, Melissa Suddeth, Neil Fernandopulle, Russell Vossbrink, and Mary Lou Nicholson.
Joint NIJ/SWGDM Working Group

- The National Institute of Justice's (NIJ) Office of Investigative and Forensic Sciences has invited SWGDAM to collaborate to form a DNA Efficiency Improvement Working Group (DEI WG) to develop best practices for the enhancement of DNA laboratory efficiency.

- The DEI WG was populated using nominations solicited from SWGDAM participating and NIJ DNA Capacity Enhancement and Backlog Reduction funded agencies and will meet using a combination of remote and in-person meetings over the course of 12-18 months.

- The Working Group is composed of subcommittees targeting the high-leverage areas of Laboratory Operations, Training and Hiring, Reporting and Data Management, Case Intake Lifecycle, and New Technologies and Change Management.

- NIJ will provide the funding for all non-federal government participants.

- SWGDAM Participants include: Jeanette Wallin, Kristin Sasinouski, Eugene Lien, Joanie Brocato, Juliet Rolando, Melissa Suddeth, Amber Carr, Tamyra Moretti, Lisa Schiermeier-Wood, Brenda Danosky, Lilly Moreno, Russell Vossbrink, and Evelyn Ridgley.

- The Working Group has held meetings on March 11-13, 2019 and August 14-16, 2019 in Washington, DC and has scheduled its next meeting for January 22-24, 2020 in Washington, DC.
SWGDAM has empaneled a Forensic DNA Casework Expert System Working Group.

This working group has been tasked to evaluate the feasibility of using allele calling software tools as Expert Systems (as defined in the NDIS Operational Procedures) for interpreting forensic casework samples in ways similar to or different from the manner in which these tools are already used DNA databasing laboratories.

The WG will essentially serve as an extension to the 2005 SWGDAM Expert System Committee that recommended the current NDIS Expert System requirements.

Any resulting SWGDAM guideline document will likely be cited in the NDIS Operational Procedures as a compliance requirement for the submission of evaluations of forensic casework expert systems to the FBI for NDIS approval.

Participants include: Amy McGuckian (Chair), Darrel Oubre (Vice Chair), Chris Carney, James Corcoran, Eric Duvall, Jessica Hannah, Brian Harmon, and Marla Kaplan.
QAS Revision Timeline

SWGDAM approved its proposed changes to the *Quality Assurance Standards for Forensic DNA Typing Laboratories* at its January 2018 Regular Meeting and the *Quality Assurance Standards for DNA Databasing Laboratories* via electronic vote on June 1, 2018.

- These draft QAS documents are posted on the Home Page of SWGDAM.org.
- Both documents were forwarded to the FBI Director for review and approval on March 25, 2019.

SWGDAM aligned the QAS Audit Documents with their respective proposed revised QAS and the SWGDAM Executive Board approved them via electronic vote on February 14, 2019.

- These draft QAS audit documents are posted on the Home Page of SWGDAM.org.
- Both documents were forwarded to the FBI Director for review and approval on March 25, 2019.
- The FBI Director approved both documents on May 20, 2019.

SWGDAM drafted a QAS Guidance document which was sent out for review and was approved by the membership at the July 2019 SWGDAM Meeting.

- This document contains the explanatory information historically contained in the QAS Audit Documents.
- SWGDAM will update this document annually based on feedback from users, the NDIS Custodian, and Chair of the NDIS Audit Review Panel.

The FBI has coordinated with SWGDAM for a July 1, 2020 effective date to provide laboratories maximum time to implement any new measures necessary for compliance.
Biology/DNA SAC Interactions
Carl Sobieralski of the Indiana State Police Laboratory is the new Biology/DNA Scientific Area Committee’s (SAC) SWGDAM Liaison.

In this critical liaison role, Carl will be invited to all SWGDAM Regular Meetings and participate in all SWGDAM activities to include circulating among SWGDAM’s committees and working groups during Committee Breakout Sessions.

The SWGDAM Vice Chair continues to have a standing invitation to participate in the monthly teleconferences held by the Biology/DNA SAC as well as to attend regularly scheduled OSAC meetings to represent SWGDAM.

SWGDAM Vice Chair Russell Vossbrink participated on the August 23rd, September 19th, and November 15th Biology/DNA SAC Teleconferences.
• The SWGDAM EB has granted the Biology/DNA Scientific Area Committee (SAC) Interested Party status to comment on SWGDAM draft documents during the SWGDAM Membership Technical Review period required by the SWGDAM Bylaws(V.C.3).

• SWGDAM will provide all guidance documents for review and comment to the Biology/DNA SAC during the required 30 day SWGDAM Body Technical Review period and comments made by individual OSAC reviewers will be submitted, compiled, and adjudicated together with individual SWGDAM member comments.
The Organization of Scientific Area Committees for Forensic Science (OSAC) and SWGDAM are collaborating on a combined DNA Process Mapping Project.

This working group will establish a process map detailing the specific steps executed during the casework DNA analysis process from sample intake through reporting.

It is anticipated that the WG’s product will benefit the current and future activities of groups such as the OSAC, SWGDAM, NIJ’s DNA Efficiency Improvement Working Group, and NIST’s future Human Factors Working Group on DNA Mixture Interpretation to continually improve the delivery of forensic DNA analysis services.

OSAC/SWGDAM DNA Process Mapping Sessions were held on November 28-30, 2018 and May 1-3, 2019. A third session is being considered scheduled for calendar year 2020.

SWGDAM participants included: Amber Carr, Ann Marie Gross, Eugene Lien, Melissa Suddeth, and Jeanette Walin.
Committee Work
Committees

– Autosomal STR Interpretation
– CODIS
– Laboratory Operations
– Lineage Marker
– Next Generation Sequencing Working Group
– Quality Assurance
– Rapid-DNA
Working Groups

– Body Fluid Identification

– Forensic DNA Casework Expert System
Committee Updates
Autosomal STR
## Committee Members & Invited Guests

### Members
- Joel Sutton *(Chair)*
- Bruce Heidebrecht *(Vice-chair)*
- Shawn Montpetit *(EB)*
- Tamyra Moretti
- Russell Gettig

### Invited Guests
- Jerrilyn Conway
- Neil Fernandopulle
- Taylor Scott
- Jennifer Breaux
- Mike Smith
- Kristin Sasinouski
- Vanessa Nelson
Committee
Goals/Objectives

• Review and revise as needed the SWGDAM Autosomal STR Interpretation Guidelines
• Current objective is to incorporate guidelines for interpreting probabilistic genotyping data
Committee
Tasks/Accomplishments of Mtg

• We had two conference calls ahead of this meeting to discuss revisions
  – 21 March 2019
  – 16 May 2019

• Decision points
  – This will be a stand-alone document, specific to PG
  – Reference the current document where needed
Committee
Tasks/Accomplishments of Mtg

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Scientific Working Group on DNA Analysis Methods
Interpretation Guidelines for Autosomal STR Typing with Probabilistic Genotyping by Forensic DNA Testing Laboratories
• “This document provides guidelines for the interpretation of DNA typing results from short tandem repeats (STR) with probabilistic genotyping using electrophoresis-based data.”

• “Laboratories currently using binary methods should refer to the current SWGDAM Interpretation Guidelines.”
Committee
Tasks/Accomplishments of Mtg

• Section 1 – mostly done and will be a summary of what labs need to assess prior to running samples through the PG tool
  – Will reference the current SWGDAM guidelines for much of this information
• Sections 2-4 have been assigned to groups to begin drafting guidance
  – Include guidance for using Prob Gen with CODIS applications
• Glossary will be completed at the end
• References and suggested readings will also be updated to include current publications on Prob Gen
The Committee plans to have two conference calls (September and November) to continue working on the revisions ahead of the January 2020 meeting.
• Contact information for Committee
  – Joel Sutton (Chair) joel.d.sutton2.civ@mail.mil
  – Bruce Heidebrecht (Vice-chair) Bruce.Heidebrecht@maryland.gov
CODIS
Committee Members & Invited Guests

- Chair: Darrel Oubre
- Co-Chair: Deedra Hughes

- Members:
  Deedra Hughes, Angelo Della Manna, Scott McWilliams, John Tonkyn

- Invited Guests:
  Jessica James, Justin Maxwell, Ashley Murray, Juls Rolando

- Visitors: N/A

- Next Meeting date: Jan 2020
Committee
Goals/Objectives

Objectives:

• To identify, evaluate and research issues relating to the use of CODIS in federal, state and local forensic laboratories

  – If in the course of the review of such issues, the CODIS committee determines that revisions to the FBI Director’s Quality Assurance Standards for Forensic DNA Testing Laboratories and Convicted Offender DNA Databasing Laboratories are needed, the committee shall recommend such changes to the Chair of SWGDAM for consideration by SWGDAM.

  – If the CODIS committee is presented with issues relating to the operation of CODIS, such as software functionality and performance, the committee shall forward such issues and their findings/recommendations through the SWGDAM chair to the Chief of the CODIS Unit.

  – The CODIS committee will review issues requested by the NDIS Procedures Board through the SWGDAM chair and will provide their findings and recommendations through the SWGDAM chair to the Board.
Committee Tasks/Accomplishments

• Review/Discuss/Propose revisions for Standard 17 Audit Guide
• Discuss implementation of Rapid
  – Rapid QAS update
  – Populating LEA ORI into CODIS (short and long term strategies)
  – Casework metadata entry barriers
• Ongoing
  – CODIS Committee will be reviewing the draft QAS training for Std 17 scenarios and CODIS related standards, including creation of scenario exercises/questions
  – Drafting scenarios for the CODIS Admin Handbook re:
    • Dispositioning of MP matches
    • Dispositioning of Forensic Targeted matches
CODIS Committee
Contact Info

Committee Chair:
Darrel Oubre
703-632-8315
djoubre@fbi.gov

Committee Co-Chair:
Deedra Hughes
601-420-9000
dhughes@mcl.ms.gov
Laboratory Operations
Committee
Members & Invited Guests

• Lisa Schiermeier-Wood, VA Division of Forensic Science, Chair and Amber Carr (IG), FBI Laboratory, is Vice Chair
• Members
  – Meg Aceves (IG)       Jeff Nye
  – Todd Bille (IG)       Melissa Suddeth
  – Jennifer Coursey (IG) Peter Vallone (IG)
  – Brenda Danosky (IG)   Ray Wickenheiser (IG)
  – Jason Kokoszka
  – Lilly Moreno (IG)
Committee Goals/Objectives

- Objectives

  - To identify, evaluate, and research issues related to the efficient generation of high-quality DNA testing data by forensic laboratories in compliance with all FBI National QAS and NDIS Operational Procedure requirements.

  - To review and, as necessary, recommend revisions to the SWGDAM Contamination Prevention and Detection Guidelines for Forensic DNA Laboratories, SWGDAM Recommendations for the Efficient DNA Processing of Sexual Assault Evidence Kits, SWGDAM Guidelines for the Validation of Probabilistic Genotyping Systems, SWGDAM Guidelines for the Collection and Serological Examination of Biological Evidence, SWGDAM Guidelines for STR Enhanced Detection Methods, and SWGDAM Validation Guidelines for Forensic DNA Analysis Methods.

  - To review and, as necessary, recommend revisions to the FBI’s Quality Assurance Standards (QAS) and/or NDIS Operational Procedures Manual for the consideration of SWGDAM.
Committee Tasks/Accomplishments of Mtg

• Revisions to the 2016 SWGDAM Validation Guidelines for Forensic DNA Analysis Methods are underway.
  – Technology-specific guidelines have been moved to the appropriate Modules.
  – A general parent document has been drafted.
• Validation guidelines for the following technologies have been drafted:
  – STR megaplexes
  – Rapid DNA
  – Next Generation Sequencing
Committee
Pending/Outstanding Issues

• Revisions and module drafts to the 2016 SWGDAM Validation Guidelines for Forensic DNA Analysis Methods are undergoing review and feedback within the Lab Ops Committee and across other applicable SWGDAM committees.

• Feedback is being sought from stakeholders about the concept of inter-laboratory validation sharing.
  – Due to limited resources, some laboratories have expressed desire to adopt another laboratory’s validation (e.g., a county lab adopting a state lab’s validation and resulting protocols) for more timely implementation.
Contact Info

• Lisa Schiermeier-Wood, Chair
  – Lisa.Schiermeier-Wood@dfs.virginia.gov
Lineage Marker
Members and Invited Guests in attendance at July 2019 Committee meeting:

- **Present**
  - Chris Askew
  - Suzie Barritt-Ross
  - Michael Coble
  - Connie Fisher
  - Ann Gross
  - Marla Kaplan
  - Brandon Letts
  - Barbara McCarty
  - Steven Myers
  - Dixie Peters
  - Jeanette Wallin
  - Sascha Willuweit
  - Tim Zolandz

- **Absent**
  - Mary Lou Nicholson
  - Lutz Roewer
  - Bruce Weir
LM Committee Goals

– Committee goals/objectives

  • Update 2014 Y-STR Interpretation Guidelines
    – Projected to complete in 2020

  • Update 2019 MtDNA Interpretation Guidelines (post NGS-specific revisions)
    – Projected to complete in 2020
Committee
Tasks/Accomplishments of Mtg

• YHRD Mixture tool presentation by Sascha
• Continued refining Y-STR IG and FAQ revisions:
  – No recommendations for match probabilities
  – Theta values for MP on profiles with more than 22 loci is missing a practical publication
  – Condensing IG into a list of recommendations and all other content move to FAQ
• Designated a subset of Committee members to begin work on mtDNA IG updates
Committee
Tasks/Accomplishments of Mtg

• Designated a subset of Committee members to begin work on mtDNA IG updates:
  – Ann, Brandon, Connie, Barbara, Suzie, Chris, Dixie

• Designated a subset of Committee members to continue work on Y-STR IG updates:
  – Jeanette, Tim, Mike, Steven, Marla, Mary Lou, Sascha, Bruce, Lutz, Ann, Dixie
Committee
Pending/Outstanding Issues

• Y-STR IG revisions:
  – Committee to provide feedback on current revisions and FAQ
  – Designated members to incorporate revisions
  – Continue to have WebEx meetings to refine the IG

• YHRD updates on RL search process:
  – Not moving forward

• MtDNA IG to be split into two documents: IG and FAQ (similar to Y-STR format)
Contact Info

• Contact information for Committee
  – Dixie Peters, Chair
    • Dixie.peters@unthsc.edu
  – Ann Gross, Co-Chair
    • ann.gross@state.mn.us
Next Generation Sequencing
Next Generation Sequencing
Tasks/Accomplishments of Mtg

— Reviewed the status of the NGS validations and implementations of the operational labs represented in the Committee

— Based on the above, identified and prioritized issues and/or gaps that could potentially be addressed by the Committee:
  • Topics that can be addressed directly:
    — SNP interpretation guidelines
  • Topics that likely require outside input/involvement:
    — Sequence DB size and statistics, to include marker associations (statisticians)
    — PG software for sequence data (software developers)
    — X-STR databases and statistics (statisticians and X-STR experts)

— Reviewed the Lab Ops draft NGS Validation Guidelines
Next Generation Sequencing
Pending/Outstanding Issues

• Continue to work with Lab Ops on the NGS Validation Guidelines Addendum
  – Finalize detailed examples of percentage-based and fixed read count analytical and stochastic thresholds. These examples will be given to Lab Ops Committee for incorporation in the NGS validation guidelines.

• Discuss the task list with the EB to identify and prioritize next steps
Contact Info

• Jodi Irwin, Chair
  – jairwin@fbi.gov

• Katherine Gettings, Vice Chair
  – katherine.gettings@nist.gov
Quality Assurance
QA Committee
Members and Invited Guests

• Jocelyn Carlson (IG) - QA Committee Chair
• Beth Ann Marne – Co-Chair

• Members
  – Kristy Kadress
  – Eugene Lien
  – Amy McGuckian
  – Christie Smith

• Invited Guests
  – Dorothy Catella
  – Clark Jaw
Committee Goals/Objectives

• Complete Quality Assurance Standards (QAS) Revision Package:
  – Quality Assurance Standards (Databasing & Forensic)
  – QAS Audit Documents (Databasing & Forensic)
  – QAS Guidance Document
  – Comparison of 2020 Revisions to Current Standards
Document Anthology

- Forensic Standards
- Database Standards
- QAS Guidance Document
- Forensic Audit Document (Checklist)
- Database Audit Document (Checklist)
QA
Tasks/Accomplishments of Mtg

• Presented final revisions to the QAS Guidance Document and reviewed outstanding comments
  – Membership and Invited Guest technical review period completed in January 2019
  – Received comments and resumed weekly teleconferences to adjudicate the substantive comments
QA

Pending/Outstanding Issues

• Consult during development of QAS Auditor training
• Pilot QAS Instructor Led Training (ILT)
QA
Contact Info

• Jocelyn Carlson, Chair
  – jrcarlson@fbi.gov
Rapid DNA
Committee Members & Invited Guests

• Richard E. Wilson, Chair
• Douglas Hares
• Tom Callaghan
• George Li
• Gary Molina (Chris Piwonka)
• Brian Harmon
• Elizabeth Johnson
• Ruth Montgomery
• Chris Carney
• Lisa Grossweiler
• Joanie Brocato/Janaki Vaidyanathan/Philip Simmers
• Mark Smith
Goal: To identify, evaluate, and research issues relating to the analysis interpretation, and reporting of R-DNA testing data both in the laboratory and the booking environment.

Objectives:

The Rapid DNA Committee will discuss topics related to the use of R-DNA by law enforcement agencies both within and outside the laboratory.

The Rapid DNA Committee will review issues relating to the use of R-DNA technology such as instrument performance, legislative considerations, and pilot testing of software functionality and performance as requested by the FBI Laboratory.

The R-DNA Committee will review and, as necessary, recommend revisions to the FBI’s Quality Assurance Standards (QAS) and/or NDIS Operational Procedures Manual for the consideration of SWGDAM.
Committee Accomplishments

• Working Meeting on Monday
  – Rapid DNA Pilot States
• Continue Rapid DNA Pilot Discussions
• Several Technical Updates from NIST and the FBI
Committee Accomplishments

- NIST Rapid DNA Maturity Assessment Update
- FBI Rapid DNA Update
- FBI Rapid DNA Validation Document Discussion
- Rapid DNA Pilot Update
- Recommendations for Rapid DNA Implementation
- Rapid DNA Crime Scene Task Force Update
  - Technology Advancement Task Group
  - Non-CODIS/Courtroom Considerations Task Group
- QAS Audit Document Discussion
- Election of Co-Chair
Committee
Pending/Outstanding Issues

• Document Review
  – Recommendations for States Considering Rapid DNA
  – Validation Guidance Document
• Election of a co-chair
Rapid Booking Standards DRAFT
2020 Timeline

SWGDAM
January 6 – 9, 2020
• Monday - Rapid Pilot Meeting
  • Lessons learned
• Tuesday - ½ day Rapid DNA Update to include Booking Standards

Rapid Committeefinalization of Booking Standards incorporating lessons learned from Pilot

Submission of Booking Standards for SWGDAM 30 day comment

30 day public comment period

SWGDAM
July 7 – 9, 2020
• Presentation of Booking Standards to SWGDAM Body for potential vote

Rapid Committee addresses public comments, final document sent to SWGDAM prior to July meeting

SWGDAM approved Booking Standards submitted to FBI Director for approval
Contact Info

Richard E. Wilson
CODIS Unit, FBI Laboratory
703-632-8302
rewilson@fbi.gov
Working Group Updates
Body Fluid Identification
Committee Members & Invited Guests

• Marla Kaplan (chair) and Jason Kokoszka (vice-chair)

• Committee Members:
  – Brenda Danosky
  – Evelyn Ridgely
  – Gary Shuler
  – Lily Moreno
  – Mary Lou Nicholson
  – Melissa Suddeth
  – Neil Fernandopulle
  – Ray Wickenheiser
  – Russell Vossbrink
Committee Goals/Objectives

• #1 - Investigate various direct-to-DNA workflows in use for the analysis of Sexual Assault Forensic Evidence kits

• #2 - Discuss the future of forensic serological methods and prepare a resource that laboratories can use to strategically plan for the incorporation of NGBFID techniques into their workflows
Committee

Tasks/Accomplishments of Mtg

• Questionnaire on Y-screening methods distributed to TLs via CODIS Unit list. Over 100 respondents.

• Drafted a Y-Screening/QAS crossover FAQ for the SWGDAM website.
Committee Pending/Outstanding Issues

- Data from survey needs to be analyzed and summarized.
  - Aim is to provide a resource from which laboratories looking to adopt direct-to-DNA analysis can pull ideas that are fit for use in their own laboratory.
  - Document will also address how Y-screening workflows and the personnel who perform them fit into the QAS requirements.
Committee
Pending/Outstanding Issues

- Investigation into next generation body-fluid ID techniques is on hold pending direct-to-DNA document and commercial availability of NGBFID products
Contact Info

- Marla Kaplan
  mkaplan@osp.oregon.gov

- Jason Kokoszka
  jason.kokoszka@adfs.alabama.gov
Forensic DNA Casework Expert Systems
Committee Members & Invited Guests

- Members and Invited Guests in attendance at Committee meeting
  - Amy McGuckian, Chair
  - Tamyra Moretti, Co-Chair
  - Chris Carney
  - James Corcoran
  - Eric Duvall
  - Jessica Hanna
  - Brian Harmon
  - Marla Kaplan
  - Darrel Oubre
  - Taylor Scott
Committee
Goals/Objectives

• Develop validation guidelines for the use and implementation of expert systems available for use on casework samples.

Recommendations for:
• Quality issues/settings
• Number of samples
• Pitfalls/considerations for configuring the expert system
• Testing and calibration requirements for established settings/parameters
Committee

Tasks/Accomplishments

• Worked on developing validation criteria for settings and parameters:
  - Quality issues to evaluate
  - Sample number

• Discussion with NDIS Custodian on history of expert system use for reference samples. Brainstorming workflow considerations for validation plan and implementation

• Plan of action:
  • Develop and test proposed validation parameters on data sets.
  • Identified need for additional volunteers (labs) to assist with testing out recommended parameters
  • Present data and proposed validation setting parameters to SWGDAM body for feedback/additional considerations January 2020 meeting.
Committee Pending/Outstanding Issues

- Acquire volunteers to assist committee with testing proposed validation parameters
- Finish identifying and drafting validation parameters
- Test proposed parameters (data)
- Draft additional guidance for implementation
- Following completion of validation guidelines propose recommendations to NDIS Board and QA Committee for revisions to NDIS Operational Procedures and QAS.
Contact Info

• Contact information for Committee
  Amy McGuckian, Chair
  mcguckiana@pbso.org
  
  Tamyra Moretti, Co-chair
  tmoretti@fbi.gov
Future Business
Rapid DNA Testing

• SWGDAM nominated participants for ASCLD’s ad hoc Task Force on Rapid DNA which consists of 3 subcommittees.
  • The goal of the committee is to develop policies and best practices that can serve as a template for jurisdictions to enable quicker, more uniform and more effective implementation.
    – Law Enforcement External – Tom Callaghan (Member)
    – Crime Lab Internal – George Li (Invited Guest)
    – Mass Disaster/Victim ID – Patty Aagaard (FBI representative)

• SWGDAM has published a Position Statement on Rapid DNA Analysis which is available on SWGDAM.org on the Publications Page.

• Will propose a 3rd Quality Assurance Standard (QAS) document for R-DNA testing in non-laboratory settings for consideration by the FBI Director.
  • The draft Standards for the Operation of Rapid DNA Systems By Law Enforcement Agencies in the Booking Environment to be used only for pilot testing were approved by the SWGDAM Executive Board via electronic ballot on February 25, 2019.
SWGDAM approved its proposed changes to the Quality Assurance Standards for Forensic DNA Typing Laboratories at its January 2018 Regular Meeting and the Quality Assurance Standards for DNA Databasing Laboratories via electronic vote on June 1, 2018.

• These draft QAS documents are posted on the Home Page of SWGDAM.org.
• Both documents were forwarded to the FBI Director for review and approval on March 25, 2019.

SWGDAM aligned the QAS Audit Documents with their respective proposed revised QAS standards and the SWGDAM Executive Board approved them via electronic vote on February 14, 2019.

• These draft QAS audit documents are posted on the Home Page of SWGDAM.org.
• Both documents were forwarded to the FBI Director for review and approval on March 25, 2019.
• The FBI Director approved both documents on May 20, 2019.

SWGDAM drafted a QAS Guidance document which was sent out for review and was approved by the membership at the July 2019 SWGDAM Meeting.

• This document contains the explanatory information historically contained in the QAS Audit Documents.
• SWGDAM will update this document annually based on feedback from users, the NDIS Custodian, and Chair of the NDIS Audit Review Panel.

The FBI has coordinated with SWGDAM for a July 2020 effective date to provide laboratories maximum time to implement any new measures necessary for compliance.
The SWGDAM Chair requested that the Laboratory Operations Committee discuss the topic of contextual bias in forensic DNA testing and advise the SWGDAM Executive Board (EB) on what, if any, potential action SWGDAM should take on this topic.

- The Committee held a discussion regarding contextual bias during its first teleconference and recommended that SWGDAM act to discuss this topic advising that "Because this is such a broad topic and applies to all forensic disciplines, ...SWGDAM issue a Communication recommending standard practices to avoid contextual bias specifically for DNA casework."

- Based on this recommendation, the SWGDAM EB endorsed the formation of a Contextual Bias Working Group at its May 2017 teleconference.

- The convening of this Working Group has been tabled by the SWGDAM Chair until SWGDAM has completed its work related to proposed changes to the 2011 FBI Quality Assurance Standards (QAS).
Familial Searching

- **Recommendations from the SWGDAM Ad Hoc Working Group on Familial Searching (2013)**
  - **Recommendation 1.4**: Once the additional CODIS core loci are implemented, the Working Group recommends that these issues be reconsidered. Meanwhile, the data accompanying these recommendations may provide guidance to states considering routine familial searching based upon the kinship LRs.

- The 2017-2020 SWGDAM Executive Board continues to discuss reconsideration of the 2013 recommendations now that the expanded CODIS core loci have been implemented.

- As a member of the FBI’s NDIS Procedures Board, the SWGDAM Chair continues to liaison with the FBI and NDIS Board regarding convening a SWGDAM Working Group to reexamine this topic.
www.swgdam.org

Since July 2015: Over 88,000 visits
www.swgdam.org

- Home Page
  - About SWGDAM
    - Includes links to SWGDAM participation surveys
    - Includes links to SWGDAM history information
  - Updates
  - Upcoming and Past Meetings
  - Redirects to About Us, Publications, Public Comments, and Links Pages
- About SWGDAM Redirect
  - Bylaws Page
  - Committees Page
    - Includes a link to current SWGDAM Committee participants
    - Includes a link to current SWGDAM Committee activities
  - Members Page
• Publications Redirect
  – SWGDAM Documents, SWGDAM Communications, Quality Assurance Standards Documents, and Miscellaneous Communications
  – Meetings Page
    • Includes links to Semi-annual Reports and Chair Reports by year

• Public Comments Redirect
  • Serves as the public comment portal
  • FAQ Page

• Contact Redirect
  • Serves as the general inquiry portal
  • Links Page
    – Government agencies
    – Organizations
    – Other Scientific Working Groups (SWG)
    – SWGDAM content webinars, etc.
SWGDAM continues to receive suggestions regarding the functionality and performance of SWGDAM.org.

The site is currently maintained with no formally obligated funding by NIST using existing IT resources and staff for whom the website is an ancillary task. All website submissions are reviewed, but implementation of individual suggestions must be balanced against the realities of these constraints.

The 2017-2020 SWGDAM Executive Board continues to review SWGDAM’s current communication strategies and discuss the feasibility of potential improvements and new outreach opportunities.
Contact Us

[Web Link: SWGDAM.org]