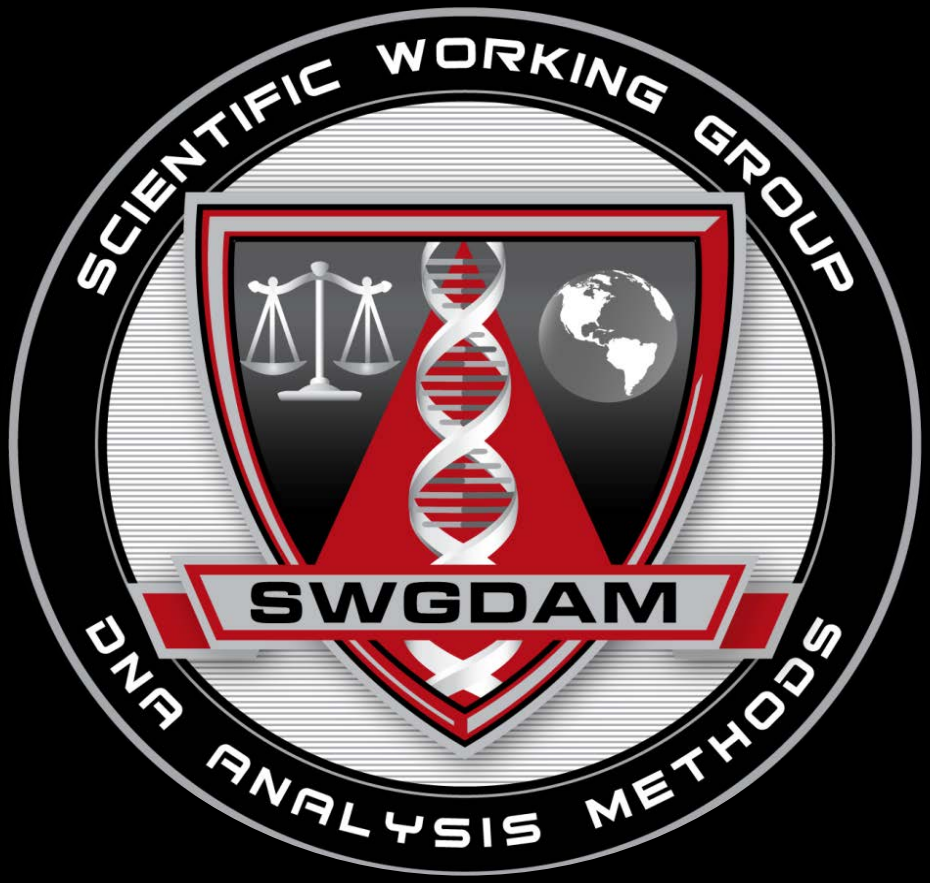
SWGDAM Update



ENSFI DNA Working Group Meeting

Responsibilities

(1) to recommend revisions, as necessary, to the *Quality Assurance Standards for Forensic DNA Testing Laboratories* and the *Quality Assurance Standards for DNA Databasing Laboratories*;

(2) to serve as a forum to discuss, share, and evaluate forensic biology methods, protocols, training, and research to enhance forensic biology services; and

(3) to recommend and conduct research to develop and/or validate forensic biology methods.

Organization

- Chair: **Anthony Onorato**
- Vice Chair: **Russell Vossbrink**
- Members are technical leaders, CODIS Administrators, or like scientists from local, state and federal crime laboratories
  - 24 Regular Members
  - 3 year membership term(s)
- Invited Guests may be invited to meetings and have full participatory privileges in Committee business
  - Over 20 routinely Invited Guests
  - 40 Invited Guests at the January 2013 Meeting

SWGDAM COMMITTEES

- Autosomal STR Interpretation
- CODIS
- Enhanced Detection Methods and Interpretation (EDMI)
- Familial Searching (Working Group)
- Mitochondrial DNA
- Missing Persons and Mass Disaster
- Rapid DNA
- Quality Assurance (QA)
- Y-STR

Meetings

- One SWGDAM Meeting held in 2012
  - January 17-19, 2012
  - July 10-12, 2012
    - First time in over 20 years that SWGDAM did not meet
    - Resulted from funding issues
    - The FBI Laboratory will be funding SWGDAM's 2013 regular meetings
- Three SWGDAM Meetings to be held in 2013
  - January 15-17, 2013
    - Hosted Rapid-DNA Instrument vendors as a part of the Technical and Committee sessions.
    - Please see the Open Letter to R-DNA Developers dated February 15, 2013 on SWGDAM.org for a summary of these sessions.
  - July 9-11, 2013
  - November 20-21, 2013 (Open Meeting)

Recent Business

SWGDAM.org

- In collaboration with the National Institute of Standards (NIST) and Technology, SWGDAM launched a website, SWGDAM.org.

NEW COMMITTEES

- The SWGDAM Chair, with the concurrence of the SWGDAM EB, re-empanelled and populated the QA Committee.
  - Members include: Jodi Dahl, Chair; Beth Ann Marne, Co-Chair; Tina Delgado; Amy McGuckian; Nicole Nicklow; and Peg Schwartz
- The SWGDAM Chair, with the concurrence of the SWGDAM EB, empanelled and populated an Y-STR Committee.
  - Members include: Tamyra Moretti, Chair; Jack Ballantyne, Co-Chair; Steven Myers; and Bruce Weir
- The SWGDAM Chair, with the concurrence of the SWGDAM EB, empanelled an Familial Searching Working Group to assess the feasibility of conducting familial searches of the National DNA Index System (NDIS).
  - Members include: Gary Sims, Chair; Ranajit Chakraborty; Peter Gill; Ken Kidd; Brad Jenkins; and Steven Myers

GUIDELINES

- The SWGDAM Membership approved the Scientific Working Group on DNA Analysis Methods Validation Guidelines for DNA Analysis Methods revised by the Enhanced Detection Methods and Interpretation Committee.
  - This revision was approved in December 2012 and is available on SWGDAM.org.

GUIDELINES

- The SWGDAM Membership approved the Scientific Working Group on DNA Analysis Methods Training Guidelines revised by the Quality Assurance Committee.
  - This revision was approved in January 201 and is available on SWGDAM.org.

OPEN LETTERS

- After reviewing the current status and utility of the US Y-STR database, the SWGDAM membership voted to prepare and forward a letter to the National Institute of Justice (NIJ) to reaffirm its support for the database and recommend that the funding of this useful tool be continued.
  - The SWGDAM Chair, with the concurrence of the SWGDAM EB, prepared and forwarded a letter dated March 1, 2012 to the National Institute of Justice (NIJ).

OPEN LETTERS

- The SWGDAM EB prepared, approved, and issued an open letter regarding the claims raised in *State vs. Abernathy* that the CODIS core loci are "Associate" with medical conditions/diseases dated September 17, 2012.

- The SWGDAM Membership approved the open letter issued by the SWGDAM EB regarding the claims raised in *State vs. Abernathy* that the CODIS core loci are "Associate" with medical conditions/diseases dated January 17, 2013.

OPEN LETTERS

- The SWGDAM membership voted to approve and forward its request for a non-binding informal advisory opinion to the Equal Employment Opportunity Commission (EEOC) at its January 2012 Regular Meeting.
  - The SWGDAM Chair prepared and forwarded a letter dated January 30, 2012 to the EEOC.
  - SWGDAM received a response via e-mail from the EEOC dated June 6, 2012 and it is posted on SWGDAM.org.

TRAINING MATERIALS

- The SWGDAM Chair, with the concurrence of the SWGDAM EB, and in collaboration with the National Institute of Standards and Technology (NIST), made the Mixture Committee's PowerPoint shows "Mixture 6" and "Mixture IQAS2904" available on STRBase with a link through the Resource Page of SWGDAM.org.

PUBLIC UPDATES

- Eric Pokorak (EB) participated in an ASCLD sponsored roundtable discussion on a potential US standard for DNA consumables held at the American Academy of Forensic Sciences (AAFS) meeting on February 23, 2012.
- In April 2012, Douglas Hares (IG) provided a SWGDAM update a European Network of Forensic Science Institutes (ENFSI) DNA Working Group meeting in Linkoping, Sweden.
- In June 2012, Jack Ballantyne (IG) provided a SWGDAM update at the Association of Forensic DNA Analysts and Administrators (AFDAA) meeting in San Antonio, Texas.

Committee Business

STR Committee

- The Autosomal STR Interpretation Committee has been tasked to identify, evaluate, and research issues related to the implementation of the SWGDAM Interpretation Guidelines for Autosomal STR Typing for Forensic DNA Testing Laboratories. The chair of this Committee is John Butler of the National Institute of Standards and Technology.
  - Will review and, if necessary, recommend revisions to the SWGDAM Interpretation Guidelines for Autosomal STR Typing for Forensic DNA Testing Laboratories January 2010.
  - This revision will Include guidance for complex mixtures (i.e., more than 2 contributors)

CODIS Committee

- This CODIS Committee has been tasked to identify, evaluate, and research issues relating to the use of the Combined DNA Index System (CODIS) in federal, state, and local forensic laboratories. The chair of this Committee is Douglas Hares of the FBI Laboratory.
  - Will review issues related to the use of CODIS.
  - Will review issues relating to the operation of CODIS, such as software functionality and performance.
  - Will review issues submitted by the NDIS Procedures Board through the SWGDAM Chair.

EDMI Committee

- The Enhanced Detection Methods and Interpretation (EDMI) Committee has been tasked to establish interpretation and validation procedures for enhanced detection methods, including low template DNA (LCN) analysis. The chair of this Committee is Eugene Lien of the New York City Office of the Chief Medical Examiner.
  - Will prepare guidelines for the validation of enhanced detection methods.
  - Will prepare guidelines for the interpretation of data generated by enhanced detection methods.
  - Will review the sections of the current NDIS Procedures Board relevant to the use of enhanced detection methods and will provide their findings/recommendations to the NDIS Procedures Board via the SWGDAM Chair.

Familial Searching WG

- At the request of the Federal Bureau of Investigation's CODIS Unit, SWGDAM has empanelled an *Ad Hoc* Working Group on Familial Searching. *Ad Hoc* Working Groups are generally convened to provide feedback on specific issues within a limited time frame. The manager of this group is Gary Sims of the California Department of Justice. The *Ad Hoc* working Group on Familial Searching is being empanelled to respond to the following questions from a scientific perspective:
  - If the number of false positives generated prior to finding a true match is inversely related to the likelihood of sibship, does this suggest that many true siblings would not be found in large databases? If so, is there an optimal database size range for performing familial searching?
  - Is it possible to establish the number of ranked candidates (kinship matching) that would require investigation to ascertain a "true" relative when searching a database with over 10 million DNA profiles? If so, what is that number?
  - Verify that kinship matching (producing a ranked list of candidates based upon kinship statistics) is more efficient at detecting relatives than counting the number of alleles shared.

MISSING PERSONS

- The Missing Persons and Mass Disaster (MP/MD) Committee has been tasked to identify, evaluate, and research issues relating to the testing of missing persons evidence and the use of the Combined DNA Index System (CODIS) in federal, state, and local forensic laboratories for missing person and mass disaster associations. The chair of this Committee is John Tonkyn of the California Department of Justice.
  - The MP/MD Committee will develop and deliver training on the various components of the Missing Persons processes to the forensic DNA community.
  - The MP/MD Committee will prepare a guidance document(s) for processing missing person casework that will include: sample procedures (reference sample vs. remains), metadata; client/lab communications and resources; missing persons searches, search statistics, association management and dispositions; missing persons reporting; pedigree statistics; and information release.

Mitochondrial DNA

- The Mitochondrial DNA (mtDNA) Committee has been tasked to establish interpretation and validation procedures for mitochondrial DNA testing. The Acting Chair of this Committee is Cathy Knutson of the Minnesota Bureau of Criminal Apprehension.
  - Will review and, if necessary, recommend revisions to the SWGDAM Guidelines for Mitochondrial DNA (mtDNA) Nucleotide Sequence Interpretation issued in April 2003.
  - Will recommend an approach for the calculation of mitochondrial DNA haplotype frequency estimates and incorporate this guidance into its revision of the April 2003 SWGDAM Guidelines for Mitochondrial DNA (mtDNA) Nucleotide Sequence Interpretation.
  - Will work jointly with the Y-STR Committee to develop analogous recommendations for as many shared haplotype testing considerations as is practicable.
  - Will create a companion document for the SWGDAM Guidelines for Mitochondrial DNA (mtDNA) Nucleotide Sequence Interpretation document designed to contain additional sequence interpretation clarification.

Quality Assurance

- The Quality Assurance Committee has been tasked to identify, evaluate, and research issues relating to the quality of forensic DNA testing. The chair of this Committee is Jodi Dahl of the FBI Laboratory.
  - Will create a SWGDAM guidance document containing best practice guidelines for contamination prevention in forensic DNA testing laboratories.
  - Will create a companion document for the Quality Assurance Standards (QAS) documents designed to contain additional application, guidance, and/or interpretation clarification for the QAS requirements.

Rapid-DNA Committee

- The Rapid DNA Committee has been tasked to identify, evaluate, and research issues relating to R-DNA testing. The chair of this Committee is Jennifer Wendel of the FBI Laboratory.
  - Will make recommendations for the revision or creation of any existing/new QA guidance document(s) required for the use of rapid DNA methods by forensic DNA testing laboratories.

Y-STR Committee

- The Y-STR Committee has been tasked to identify, evaluate, and research issues relating to forensic Y chromosome testing. The chair of this Committee is Tamyra Moretti of the FBI Laboratory.
  - Will review and, if necessary, recommend revisions to the January 2009 SWGDAM Y-Chromosome Short Tandem Repeat (Y-STR) Interpretation Guidelines.
  - Will recommend an approach for the calculation of Y-chromosome haplotype frequency estimates and incorporate this guidance into its revision of the January 2009 SWGDAM Y-Chromosome Short Tandem Repeat (Y-STR) interpretation Guidelines.
  - Will provide guidance for the identification, categorization, and interpretation of mixed Y-chromosome results.
  - Will recommend an approach for the incorporation of a theta correction for the calculation of Y-chromosome haplotype frequency estimates.
  - Will work jointly with the MS/mtDNA Committee to develop analogous recommendations for as many shared haplotype testing considerations as is practicable.

Contact Info

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