

SWGAM UPDATE for ENFSI



April 2010



SWGAM UPDATE

Scientific Working Group on DNA Analysis Methods

Mission:

- (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.

2009-2010 24/5/10



SWGAM UPDATE

Membership

- Members are predominately technical leaders from state and federal crime labs
 - 3 year terms
 - Appointed by Chair
 - 17 regular members
 - 28 invited guests (4 international)
- Chair: Ted Staples (*appointed by FBI director*)
- Vice Chair: Heather Seubert FBI (*appointed by chair*)
- Executive Board: Angelo Della Manna, Phil Kinsey, Ken Konzak, Margaret Schwartz, Taylor Scott
- Executive Secretary: Dawn Herkenham (*appointed by chair*)

2009-2010 24/5/10



SWGAM UPDATE

Standing Committees

- CODIS: *Doug Hares*
- LT DNA (*new name*): *Rich Guerrieri (acting)*
- Mass Spectrometry: *Les McCurdy*
- Mito: *Alice Isenberg*
- Missing Persons & Mass Disaster: *John Planz*
- Mixture Interpretation: *John Butler*
- May create Ad Hoc committees as needed from request of FBI director

2009-2010 24/5/10



SWGAM UPDATE

COMMITTEE REPORTS JANUARY 2010

2009-2010 24/5/10



CODIS

Tasks/objectives accomplished:

- Discussions of composite profiles and how they relate to NDIS
- Discussions of expanding the core CODIS loci in the future

2009-2010 24/5/10



Low Level DNA... → EDM I

- Enhanced Detection Methods and Interpretation Committee

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EDMI

Ad Hoc Group
(Jan 2009-Jan 2010)

- Alice Isenberg (Chair)
- John Butler
- Theresa Caragine
- Art Eisenberg
- Doug Hares
- Brian Hoey
- Tamyra Moretti
- Eric Pokorak
- Rich Guerrieri
- Gary Sims

SWGAM Committee
(Est. Jan 2010)

- Rich Guerrieri (Acting Chair)
- Juls Bickmore
- Todd Bille
- Martin Fairley
- Brian Hoey
- Kristine Kadash
- Eugene Lien
- Tamyra Moretti
- Amy McGuckian

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EDMI

- Decide on terminology
- Recommend Committee goals
- Review (modify?) NDIS Procedures LCN definition for clarification purposes
- Strategize NDIS applicability recommendations
- Homework:
 - Lit review
 - Status review (US, UK)
 - Identify additional experts?
 - Refine approach for accomplishing goals

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Mass Spec mtDNA

- Discussion regarding primer synthesis quality
- Several audits against 2009 doc
- mtDNA mixture analysis
 - Single locus
- No pending issues

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MP Mass Disaster

- Minifiler accepted at NDIS.

Task at hand:

- Request to provide training for Missing Persons related topics for the CODIS 6.0/7.0 transition.
 - meet with 6.0 user group in July 2010
 - conduct training at National CODIS Conference Nov 2010

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MP Mass Disaster

Areas to Address

- Laboratory's obligations following sample entry
- Revisit business pathways following a generated MP association report in CODIS
- How to interpret association reports
- JPLR and reporting statistics
- Auxiliary data, asking for more resources

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Mixture Committee

- **Completed STR interpretation guidelines** based on feedback from entire SWGDAM group
- Collect and publish case summary analysis
 - conducted in 2007-2008 to see how many and what type of mixtures are being observed in crime labs
- Prepare training materials to aid mixture interpretation

2008-2009 2010



Mixture Committee

- Made final revisions to STR interpretation guidelines using comments received from January 12, 2010 full SWGDAM discussion
- **STR Interpretation Guidelines APPROVED!**
- Discussed future directions for the committee

2008-2009 2010



Availability of the SWGDAM STR Interpretation Guidelines

FBI - Federal Bureau of Investigation

SWGDAM Interpretation Guidelines for Autosomal STR Typing SWGDAM APPROVED 1/14/10

SWGDAM Interpretation Guidelines for Autosomal STR Typing by Forensic DNA Testing Laboratories

Scientific Working Group on DNA Analysis Methods (SWGDAM)

The Scientific Working Group on DNA Analysis Methods, better known by its acronym of SWGDAM, is a group of approximately 50 scientists representing federal, state, and local forensic DNA laboratories in the United States and Canada. During meetings, which are held twice a year, subcommittees discuss topics of interest to the forensic DNA community and often develop documents to provide direction and guidance for the community. A mixture interpretation subcommittee was formed in January 2007 and worked for several years to provide a guidance document on autosomal short tandem repeat (STR). This document was presented to the full SWGDAM group and received approval in January 2010.

[SWGDAM Interpretation Guidelines for Autosomal STR Typing by DNA Testing Forensic Laboratories \(pdf\) \(html\)](#)
[CODIS Brochure \(html\) | Print version \(pdf\)](#)
[DNA Fingerprint Act of 2005, Equipment Policy](#)

http://www.fbi.gov/hq/lab/html/codis_swgdam.pdf



Mixture Committee- future

- Mixture case summary data and publication
- Training materials – web-based?
- Decision tree/flowcharts to aid mixture interp
- Software solutions (including freeware)
- Validation assistance
 - Experimental design for setting thresholds, etc.
- Y-STR mixtures & software under development

2008-2009 2010



Mixture Committee- future

- Gather training materials and examples to illustrate the principles described in the STR interpretation guidelines
 - Promega Oct 2010 meeting workshop
 - Web-based training (possibly with NIJ support)
- Guidelines for Y-STR mixtures?

2008-2009 2010



SWGDAM UPDATE

Contact information:

Ted Staples, SWGDAM Chair
Ted.Staples@gbi.ga.gov

QUESTIONS?

2008-2009 2010