

#### **Asian Forensic Sciences Network**

World Forensics Festival Seoul, Korea October 14, 2014



# Recent Activities in the United States: National Commission on Forensic Science (NCFS) and Organization of Scientific Area Committees (OSAC)

John M. Butler, Ph.D.

National Institute of Standards and Technology
NIST Fellow & Special Assistant to the Director for Forensic Science
Vice-Chair, National Commission on Forensic Science



# Scientific Working Group on DNA Analysis Methods (SWGDAM)

http://www.swgdam.org/

- Established in November 1988 by FBI Laboratory
- Named Technical Working Group on DNA Analysis Methods (TWGDAM) for the first decade
- Comprised of ~50 scientists from U.S. and Canada
  - Typically 20-25 voting members and the rest as invited guests
- European Network of Forensic Science Institutes (ENFSI) DNA Working Group representative often attends
- Three day meetings held semiannually every January and July
- Current committees (6) and working groups (2):
  - Autosomal STR Interpretation, Combined DNA Index System, Enhanced Detection Methods and Interpretation, Quality Assurance, Rapid DNA, Y-STR, Probabilistic Genotyping, and Next Generation Sequencing
- Previous committees:
  - RFLP, PCR, mitochondrial DNA, mass spectrometry, training, validation, expert systems, missing persons/mass disasters, and mixture interpretation



#### **Current SWGDAM Guidelines**

Hyperlinks to documents available on SWGDAM.org

Release Date	Guidelines	Previous Versions (TWGDAM)
2010	STR Interpretation Guidelines	2000
2012	Validation Guidelines for Forensic DNA Analysis Methods	1991, 1995, 2004
2013	Mitochondrial DNA Analysis Interpretation Guidelines & Mitochondrial DNA Nomenclature Example	1993, 2003
2013	Training Guidelines	2001
2014	Guidelines for Missing Persons Casework	
2014	Interpretation Guidelines for Y-Chromosome STRs	2009

Guidelines in development: enhanced detection methods, validation of probabilistic genotyping software, and updated STR interpretation guidelines



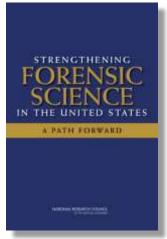
### Additional SWGDAM Documents

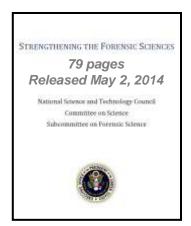
Hyperlinks to documents available on SWGDAM.org

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Date	Topic			
Oct 2009	SWGDAM Recommendations to the FBI Director on the "Interim Planfor the Release of Information in the Event of a 'Partial Match' at NDIS"			
Mar 2012	Letter to NIJ Regarding the United States Y-STR Database			
Jun 2012	Response by The US Equal Opportunity Commission (EEOC) to the request by SWGDAM for an informal advisory opinion on the GINA exemption for forensic laboratories			
Jan 2013	Open SWGDAM Letter Regarding the Claims Raised in State v. Abernathy that the CODIS Core Loci are Associated with Medical Conditions/Disease States.			
Feb 2013	SWGDAM Letter to R-DNA Developers			
Oct 2013	Recommendations from the SWGDAM Adhoc Working Group on Familial Searching			

### NCFS and OSAC:

### U.S. Efforts to Strengthen Forensic Science





http://www.whitehouse.gov/sites/default/file s/microsites/ostp/NSTC/strengthening\_the forensic\_sciences\_may\_-\_2014.pdf

- National Academy of Sciences (NAS)
   report issued in Feb 2009
- White House Subcommittee on Forensic Science (SoFS) operated from July 2009 to Dec 2012

#### **DOJ/NIST Partnership** (announced Feb 2013)

- 1. NCFS (National Commission on Forensic Science)
  - First meeting held February 3-4, 2014 in Washington DC
- 2. OSAC (Organization of Scientific Area Committees)
  - Being organized; first public meetings to be held Feb 2015

# February 3-4, 2014 was the first meeting of the National Commission on Forensic Science



37 Commissioners + DOJ/NIST Leadership Team (with ~100 public attendees)

#### Webcast of Second NCFS Meeting

http://www.nist.gov/forensics/national-commission-on-forensic-science-webcast.cfm



# Members of the National Commission on Forensic Science (NCFS)

Suzanne	Bell	Professor of Chemistry
Frederick	Bieber	Professor of Pathology
Thomas	Cech	Professor of Biochemistry
M. Bonner	Denton	Professor of Chemistry and Geosciences
Andrea	Ferreira-Gonzalez	Professor of Pathology
Stephen	Fienberg	Professor of Statistics and Social Science
James	Gates, Jr.	Professor of Physics
Troy	Duster	Professor of Sociology
Jules	Epstein	Professor of Law
Paul	Giannelli	Professor of Law

Cecelia	Crouse	Palm Beach County Sheriff's Office Crime Laboratory	
Dean	Gialamas	Los Angeles County Sheriff's Department	
Linda	Jackson	Virginia Department of Forensic Science	
John	Fudenberg	Clark County Office of the Coroner/Medical Examiner	
Ryant	Washington	Fluvanna County Sheriff's Office	
Phil	Pulaski	New York City Police Department	

Nelson	Santos	Drug Enforcement Administration ( <b>DEA</b> ) Laboratory
Greg	Czarnopys	Alcohol, Tobacco, Firearms and Explosives (ATF) Lab
Gerry	LaPorte	Office of Investigative and Forensic Sciences, NIJ
Marc	LeBeau	Federal Bureau of Investigation (FBI) Laboratory
Kathryn	Turman	Office of Victim Assistance, Federal Bureau of Investigation

## Members of the National Commission on Forensic Science (NCFS)

Ted John Matt	Hunt Kacavas Redle	Prosecuting Attorney Prosecuting Attorney Prosecuting Attorney
matt	Ittodio	r receduling / merriey
Pam	King	Public Defender
Julia	Leighton	Public Defender
Barbara	Hervey	Judge
Bridget Mary	McCormack	Judge
Jed	Rakoff	Judge
John	Butler	National Institute of Standards and Technology
David	Honey	National Intelligence for Science and Technology
Marilyn	Huestis	Chemistry and Drug Metabolism, NIDA, NIH
Patricia	Manzolillo	United States Postal Inspection Service
Jeff	Salyards	Department of Defense
Mark	Weiss	National Science Foundation
Visco and	Di Maia	Consultant in Famousia Dath alsons
Vincent	Di Maio	Consultant in Forensic Pathology
Susan	Howley	National Center for Victims of Crime
Peter	Neufeld	Innocence Project
Fran	Schrotter	American National Standards Institute

#### **National Commission on Forensic Science (NCFS)**



#### NCFS Leadership



James M. Cole Willie E. May
Deputy Attorney General Acting Director of NIST

DOJ Co-Chair NIST Co-Chair

Nelson A. Santos Vice-Chair (DOJ)



John M. Butler Vice-Chair (NIST)

Next meeting (4th): October 28-29, 2014

# NCFS Co-Chairs and OSTP Director address the first Commission meeting



#### NCFS meeting 1 (February 3, 2014)





# Informational Briefings

- Judge Harry
   Edwards spoke on
   findings from the
   2009 NAS report
- Bureau of Justice
   Statistics researcher
   Matt DuRose
   reviewed the 2009
   census of U.S.
   forensic laboratories

# White House **Subcommittee on Forensic Science** committee chairs discuss outcome of work conducted from 2009 to 2012

Patricia Manzolillo
U.S. Postal Service
Forensic Laboratory



Accreditation & Certification

**Dean Gialamas**LA County Sheriff's
Office Crime Lab



Proficiency Testing

Jeff Salyards
Defense Forensic
Science Center



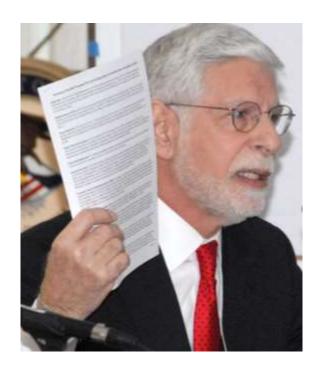
Research & Development

Gerry LaPorte
National Institute
of Justice



Documentary Standards

# Mark Stolorow (NIST) introduces the Organization of Scientific Area Committees (OSAC) plan





For more information, see <a href="http://www.nist.gov/forensics/osac.cfm">http://www.nist.gov/forensics/osac.cfm</a>

# Commission discussions were led by Vice-Chairs John Butler (NIST) and Nelson Santos (DOJ)



Discussed issues and developed subcommittee topics

#### **Current NCFS Subcommittees**

where much of the Commission work will occur...

- 1. Accreditation and Proficiency Testing
- 2. Interim Solutions
- 3. Medico-legal Death Investigation
- 4. Reporting and Testimony
- 5. Scientific Inquiry and Research
- 6. Training on Science and Law
- 7. Human Factors and Cognitive Bias

Each NCFS
subcommittee
includes individuals
beyond the
Commissioners

#### <u>Issues being examined:</u>

- (a) Foundational literature
- (b) Educational programs
- (c) Transition of research
- (d) Measuring impact

Subcommittee products will be discussed and voted on by the full Commission prior to be recommended to the Attorney General

#### NCFS Meeting 2 Topics

May 12-13, 2014

- Panel on Cognitive Bias and Human Factors
  - Speakers: Deborah Boehm-Davis, John Collins,
     Michael Risinger, David H. Kaye
- Panel on Ethics in Forensic Science
  - Speakers: Jamie Upshaw Downs, Rob Lesnevich
- Subcommittee Reports
- OSAC Update
  - Speakers: Mark Stolorow, Willie May

#### NCFS Meeting Materials Available

http://www.justice.gov/ncfs/meeting-materials.html

#### **Meeting Summary**

23 page pdf document

National Commission on Forensic Science

#### **Meeting Summary**

May 12-13, 2014

Office of Justice Programs 810 7th Street NW, Washington, DC

Speaker Slides (pdf files)

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office of the Country
On Bias in Forensic Science
National Commission on Favorest Source – May 12, 2014

National Commission on Forensic Science Meeting...

2nd National Commission on Forensic Science Webcast



#### **MEETING TWO**

References

Listing of 22 references provided to Commissioners

#### Human Factors and Cognitive Bias in Forensic Science

Deborah Boehm-Davis, Dean, College of Humanities and Social Sciences and University Professor, Department of Psychology, George Mason University

John Collins, President, Forensic Foundations Group

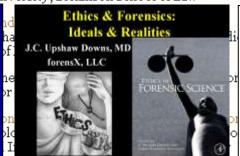
#### The Need for Sequential Unmasking

Michael Risinger, John J. Gibbons Professor of Law, Seton Hall University School of Law

#### David H. Kave

Distinguished Professor of Law and Weiss Family Faculty Scholar, Penn State University, Dickinson School of Law







#### NCFS Meeting 3 Topics

August 26-27, 2014

- Amended Bylaws Reviewed
  - Vote passed on a directive to survey police forensic units
- Panel on Cognitive Bias and Human Factors
  - Speakers: Itiel Dror and Bill Thompson
  - Human Factors Subcommittee formed
- Panel on Latent Print Automated Fingerprint Identification System (AFIS) Interoperability
  - Speakers: Melissa Gische, Austin Hicklin, Lauren Reed, and David Russell
- UK Regulator Andrew Rennison to share lessons learned from the United Kingdom
- Panel on Role of Accreditation in Forensic Science
  - Speakers: Beth Mishalanie, Ross Randlett, Roger Klein
- Subcommittee Reports

#### Future NCFS Meeting Dates

http://www.justice.gov/ncfs

Meeting 4: October 28-29, 2014

Meeting 5: January 29-30, 2015

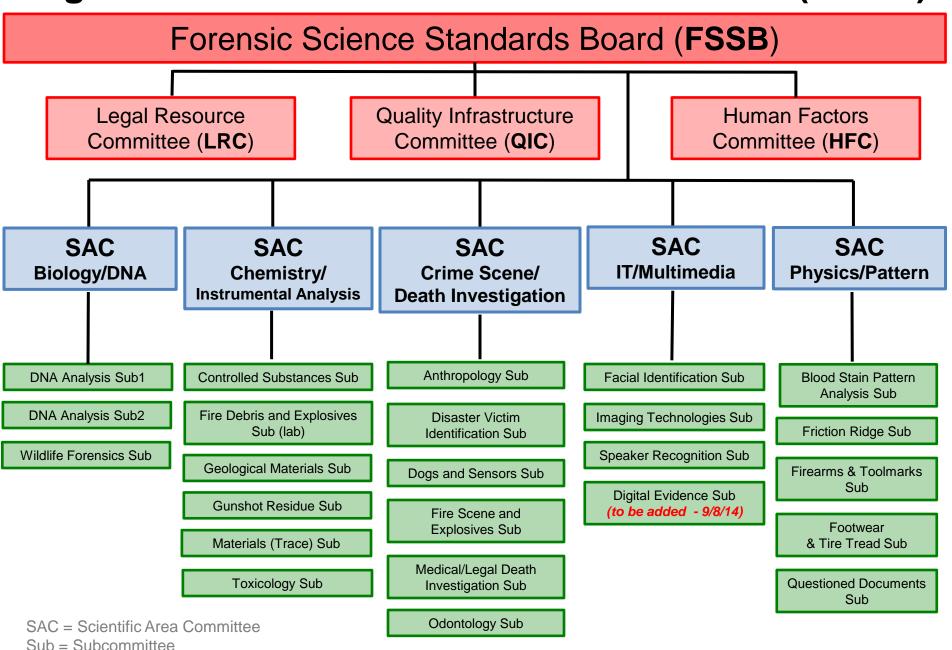
Meeting 6: April 30-May 1, 2015

# Organization of Scientific Area Committees (OSAC)

Forensic discipline-specific guidance groups administered by NIST



#### Organization of Scientific Area Committees (OSAC)



#### **Understanding the OSAC Levels**

#### Forensic Science Standards Board (FSSB)

- Set policy, rules, priorities for OSAC
- Manage OSAC Registry of Approved Standards and Approved Guidelines

#### Legal Resource, Quality Infrastructure, Human Factors Committees

 Provide advice across all forensic science and discipline committees

#### **Scientific Area Committees**

- Manage work within a scientific area (harmonize/leverage across related disciplines)
- Adopt and approve scientific area standards, (e.g., terminology, reporting requirements, conclusion statements)

#### **Discipline Specific Subcommittees (Working Groups)**

 Identify and develop (with an SDO or the canvass method) standards & guidelines for discipline

#### Notice of Inquiry (NOI) Responses Received

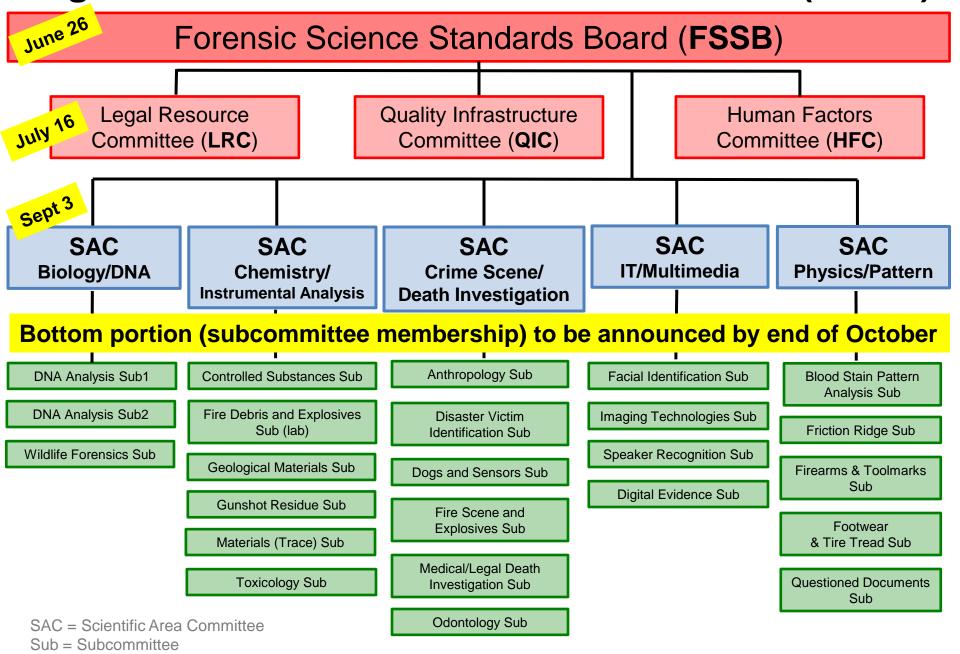
In general, the responses support the new structure.

- 82 responses received
  - 12 SWGs commented
  - 15 other groups including ASCLD, CAC, CFSO, IAI, Innocence Project, NACDL
  - More than a dozen labs and a half dozen companies
  - Individuals from 21 states and four countries (UK, Canada, Germany, and Australia)
- Public posting of comments on NIST.gov/forensics
- Highlights:
  - Practitioner voice should be a major player
  - Strongly urged to include all forensic science disciplines
  - Concern about funding (no "pay-to-play" fees)
  - Interest in consistent and open support for web postings
  - Interest in face-to-face and virtual meetings
  - Encouragement to include existing professional organizations

#### **OSAC Launch**

- February 4, 2014 announcement to NCFS
- The OSAC will be a collaborative body of more than 600 forensic science practitioners and other experts who represent all levels of the government, academia and industry.
- Establishing OSAC to strengthen the nation's use of forensic science by:
  - supporting the development and promulgation of forensic science consensus documentary standards and guidelines
  - determining each forensic discipline's research and measurement standards needs
  - ensuring that a sufficient scientific basis exists for each discipline

#### Organization of Scientific Area Committees (OSAC)



#### **OSAC Events and Information**



NIST Home > Forensics > Organization of Scientific Area Committees

# Forensic Science Home Research NIST Forensic Publications Conferences and Events Reference Materials and Standards Reference Data Forensic Science News



#### Follow NIST



#### Contact

#### Office of Special Programs

100 Bureau Drive, Stop 4701 Gaithersburg, MD 20899-8102 301-975-2756 or 301-975-2757

#### www.nist.gov/forensics/osac.cfm



#### Organization for Scientific Area Committees (OSAC)

NIST is working with the forensic science community to establish the new Organization for Scientific Area Committees (OSAC), OSAC will coordinate development of standards and guidelines for the forensic science community to improve quality and consistency of work in the forensic science community. View the current organization chart, Click on the links below to learn about OSAC developments.

See our FAQs for OSAC.

July 7, 2014 - Presentation slides for first FSSB virtual meeting (opens PDF)

June 26, 2014 - NIST Names Members to First Forensic Science Standards Board (news release)

May 14, 2014 - Forensic Committee Application Closes for 2014; Candidates May Apply for 2015

May 14, 2014 - OSAC Update Presented to National Commission on Forensic Science, presentation slides (opens PDF)

April 22, 2014 - NIST Seeks Applicants to Join Forensic Science Committees (news release)

April 11, 2014 - Calling Forensic Scientists: Apply Now to Join the NIST Organization of Scientific Area Committees (news update)

April 11, 2014 - The OSAC Roles and Responsibilities document is now available.

April 11, 2014 - Application form for NIST Organization of Scientific Area Committees is online, Apply now.

March 18, 2014 - Application Form for NIST Organization of Scientific Area Committees Coming Soon (news update)

March 18, 2014 - Updated summary of the NIST Plan for the Organization of Scientific Area Committees (pdf)

Feb. 18, 2014 - NIST Forensic Science team gave a panel presentation at the American Academy of

1313 applicants from April 11 to May 11 (>150 for DNA)

#### **FSSB** announced June 26

Feb. 18, 2014 - NIST Forensic Science team gave a panel presentation at the American Academy of Forensic Sciences Armual Meeting.

- Wiew the recorded Webcast on New Forensic Scientific Area Committees
- o Presentation slides (PDF)

Feb. 14, 2014 - NIST announces Feb. 18 Webcast on New Forensic Scientific Area Committees

Feb. 7, 2014 - NIST Presents an Infrastructure Plan to Strengthen Forensic Science Committees

Feb. 7, 2014 - Revised slide presentation on OSAC (pdf)

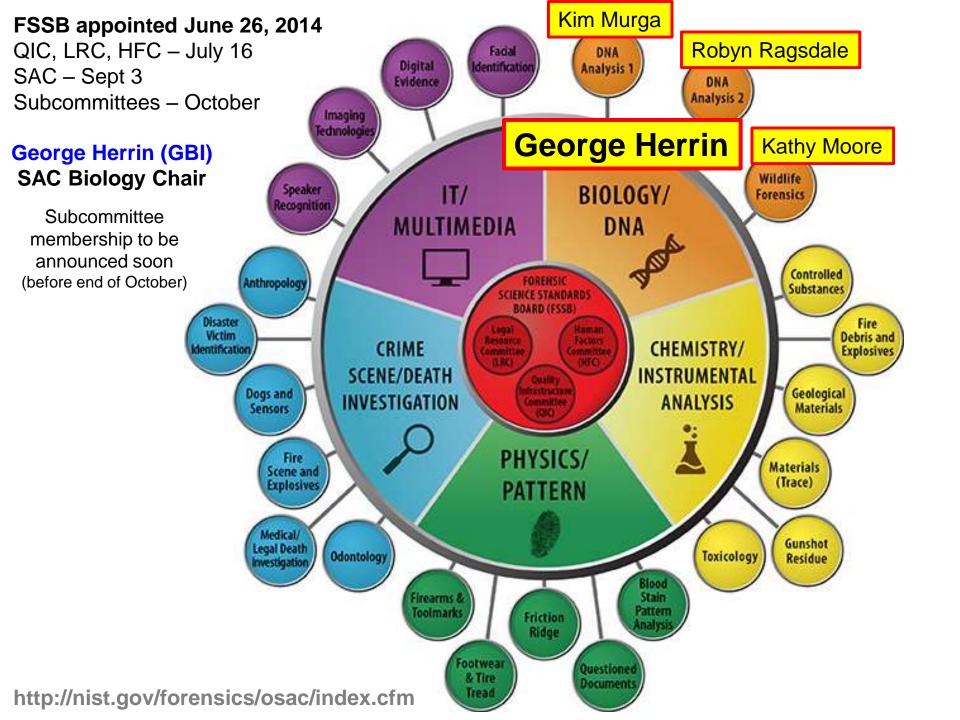
Feb. 7, 2014 - 3-page summary of the NIST Proposed Plan for the Organization of Scientific Area Committees (pdf)

Feb. 4, 2014 - Slide presentation on OSAC to the National Commission on Eprensic Science (pdf)

Feb. 4, 2014 - Public Comments on NIST Natice of (Inquiry: Possible Models for the Administration and Support for Forensic Guidance Groups (opens pdf 8MB)

Sept. 27, 2013 - NIST Invites Comments on Structure of Forensic Science Guidance Groups (news release)

		Scientific Working Group (SWG)	Topic (Forensic Discipline)	Start	Sponsor	Website
	1	SWGDAM	DNA	1988	FBI	swgdam.org
,	2	SWGMAT	Materials (Trace)	1992	FBI	swgmat.org
	3	SWGFAST	Friction Ridge (Fingerprints)	1995	FBI	swgfast.org
4	4	SWGDRUG	Controlled Substances	1997	DEA	swgdrug.org
!	5	SWGIT	Imaging Technologies	1997	FBI OTD	swgit.org
	6	SWGDOC	Document Examination	1997	FBI	swgdoc.org
•	7	SWGDE	Digital Evidence	1998	FBI OTD	swgde.org
	8	SWGGUN	Firearms & Toolmar NI I fundi	na of	SMCch	ac etannad:
	9	SWGFEX	Fire Debris & Explo NIJ funding of SWGs has stopped;			• • •
1	0	SWGSTAIN	Bloodstain Pattern SWGDAM and SWGDE will			⊨ Will
1	1	SWGTREAD	Shoeprint & Tire Tre Continue	with F	BI fundi	ng
1	2	SWGDOG	Dog & Orthogonal Detector	2004	ГВІ	swgaog.nu.eau
1	3	SWGGSR	Gun Shot Residue	2007	Collect	tively these
1	4	SWGANTH	Anthropology	2008		
1	5	SWGTOX	Toxicology	2009	21 SWC	Gs have had
1	6	FISWG Facial Identification		2009	>750 p	participants
1	7	SWGDVI	Disaster Victim Identification	2010	and hav	ve produced
1	8	SWGMDI	Medicolegal Death Investigation	2010	·	
1	9	SWGGEO	Geological Materials	2011	>250 documents	
2	20	SWGWILD	Wildlife Forensics	2011	USFWS	wildlifeforensicscience. org/ swgwild
2	21	SWGSPEAKER	Voice Analysis	2012	FBI	swg-speaker.org



# Scientific Area Committee (SAC) Biology Members

appointed September 3, 2014

George Herrin, Jr., Ph.D., SAC Chair,

Georgia Bureau of Investigation-Division of Forensic Sciences

**Kimberly Murga**, Las Vegas Metropolitan Police Department, Chair of the OSAC DNA Analysis 1 Subcommittee

**Robyn Ragsdale**, Ph.D., Florida Department of Law Enforcement, Chair of the OSAC DNA Analysis 2 Subcommittee

M. Katherine Moore, U.S. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Chair of the OSAC Wildlife Subcommittee

John Butler, Ph.D., National Institute of Standards and Technology

Thomas Callaghan, Ph.D., Federal Bureau of Investigation

Robin Cotton, Ph.D., Boston University

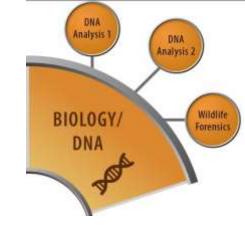
Phillip Danielson, Ph.D., University of Denver

Angelo Della Manna, Alabama Department of Forensic Sciences

**Deedra Hawk**, Wyoming Game and Fish Department Wildlife Forensic and Fish Health Laboratory

Antonio Possolo, Ph.D., National Institute of Standards and Technology

Bruce Weir, Ph.D., University of Washington



#### SWGDAM and OSAC DNA Efforts

will Co-Exist and Some Individuals Will be Members of Both

"...NIST and the FBI have agreed that SWGDAM will remain operationally with the FBI at this time..."

#### http://swgdam.org/faq.html









#### Frequently Asked Questions

On occasion, SWGDAM will use this page to post responses to frequently asked questions from the forensic DNA community or other interested parties for the purposes of general information. The intent of this page is not for it to be a comprehensive list of answers to all of the inquires SWGDAM receives, but rather a collection of those inquires that SWGDAM recognizes to be of interest to a broad spectrum of forensic DNA science practitioners and/or consumers. SWGDAM recognizes that not all inquires will be amenable to the short answer format of this page and will continue to use its members, meetings, SWGDAM.org, and conference updates to collect and disseminate information.

Please note that some questions have been edited for brevity, clarity, and/or to remove specific identifying information. Text contains within [ ] indicates information added by SWGDAM.

#### National Commission on Forensic Science

Q: What plans exist to transition SWGDAM from its current home in the FBI to the new Organization of Scientific Are Committees (OSAC)?

SWGDAM Response: Due to the unique statutory relationship between SWGDAM and the FBI with regard to the FBI Director's Quality Assurance Standards (QAS) for DNA Laboratories, NIST and the FBI have agreed that SWGDAM will remain operationally with the FBI at this time. The FBI also feels strongly that the business activities of the SWGDAM Committees are critical for the

#### **SAC Subcommittees**

http://www.nist.gov/forensics/osacroles.cfm#SB

#### **AUTHORITY**

Recommend standards and guidelines for inclusion on the Registries

#### **MAJOR DUTIES**

- Identify, develop, or coordinate standards and guidelines for SAC and FSSB consideration
- 2. Coordinate the transition of existing SWG and other documents into approved standards and guidelines
- 3. Provide a semiannual report to SAC on activities and accomplishments
- Manage subcommittee task groups to accomplish OSAC objectives

#### **MEMBERSHIP**

\*24 Subs

~ 70% practitioners

~ 20% researchers and scientists

Up To 20 Members total plus up to 5 invited guests

Plan to have appointed by end of October 2014

~ 10% R&D partners/providers

#### **Department of Justice**

#### **Policy focused**

Limited Term (FACA)

**Attorney General** 

Recommendations

National Commission on Forensic Science (NCFS)

#### **NIST**

#### **Practice focused**

Ongoing (Forensic Science Quality Infrastructure)

Organization of Scientific Area Committees (OSAC)

Forensic Science Standards Board (FSSB)



#### **Practice focused**

Ongoing (Forensic Science Quality Infrastructure)

Organization of Scientific Area Committees (OSAC)

Forensic Science Standards Board (FSSB) Outputs

Forensic Science Code of Practice

Process & technical merit

OSAC Registry of Approved Standards Technical merit

OSAC Registry of Approved Guidelines

Accrediting Bodies (e.g., ASCLD/LAB)

Providing Supplemental Material for Laboratories Audits against ISO 17025, etc.

# NSF Dear Colleague Letter regarding forensic science proposals



http://www.nsf.gov/pubs/2013/nsf13120/nsf13120.jsp

#### NSF Industry/University Research Centers



National Science Foundation 4201 Wilson Boulevard Arlington, Virginia 22230



NSF 14-066

Dear Colleague Letter - I/UCRCs in Areas Relevant to the Forensic Sciences

May 7, 2014

Dear Colleagues,

The National Science Foundation (NSF) and the National Institute of Justice (NIJ) have partnered as cosponsors to welcome proposals for establishment of Industry/University Cooperative Research Centers (I/UCRCs; see NSF 13-594; http://www.nsf.gov/publications/pub\_summ.jsp? org=ENG&ods\_key=nsf13594) in areas relevant to the forensic sciences. With permission from the Principal Investigator (PI), NIJ will share in evaluation of forensics-related I/UCRC proposals, and may co-sponsor successful proposals.

http://www.nsf.gov/pubs/2014/nsf14066/nsf14066.pdf

#### Save the Date for Future Meetings

Forensics@NIST (Gaithersburg, MD):

**December 3-4, 2014** 

will be webcast; program will showcase NIST research in DNA, digital evidence, ballistics, and statistics

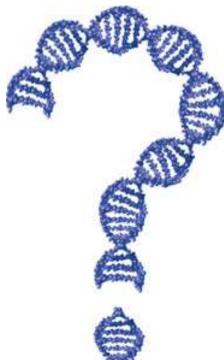
International Symposium on Forensic
 Measurement Issues and Error (Washington, DC):
 July 20-24, 2015 is being planned

National Commission on Forensic Science (NCFS): www.justice.gov/ncfs

Organization of Scientific Area Committees (OSAC): www.nist.gov/forensics/osac/index.cfm



www.nist.gov/forensics



+1-301-975-4049

john.butler@nist.gov