



**SWGDM Meeting**  
Fredericksburg, VA  
January 14, 2016



# Updates on Biology SAC, NCFS, and Recent NIST Activities

**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

Member, OSAC Biology/DNA Scientific Area Committee

OSAC Liaison to SWGDAM

Associate Editor, *Forensic Science International: Genetics*

# NIST Forensic Science Efforts

Partnership with Department of Justice

## National Commission on Forensic Science (NCFS)



*Department of Justice FACA  
co-led by NIST  
setting policy*

## Organization of Scientific Area Committees (OSAC)



*NIST-administered  
**>540 members of the community**  
establishing standards and best practices*

## NIST Funded Internal Research Programs



*~\$7.5M/year  
invested*

## NIST Forensic Science Center of Excellence



*CoE: ~\$4M/year invested for  
5 years (2015-2020)*

## International Symposium on Forensic Science Error Management



*432 participants (11 countries)*

# NIST Research Efforts to Aid Forensic Science

## SIX CURRENT FUNDED FOCUS AREAS

1. *Ballistics and Associated Tool Marks*
2. *Digital and Identification Forensics*
3. *Forensic Genetics (DNA)*
4. *Toxins*
5. *Trace*
6. *Statistics*

Applied  
Genetics Group

Internal NIST research will be supplemented by a new NIST Forensic Science Center of Excellence (FSCOPE)



# NIST Forensic Science Center of Excellence



Kickoff Meeting held  
October 26-27, 2015  
in Ames, IA

## CSAFE will focus on the following objectives:

- Bring together forensic practitioners and expert statisticians to **develop and apply statistical methods** to: latent prints, ballistics, tire marks, footwear, handwriting, bloodstain pattern, tool marks, computer and information systems, mobile devices, network traffic, social media, and GPS
- **Develop**, in collaboration with NIST scientists, **new methods for forensic evidence**
- **Develop new inference techniques that account for various sources of uncertainty**
- **Establish a sound base of interpretation for forensic evidence** in judicial settings
- **Educate and train forensic practitioners, judges and attorneys**, and the next generation of statisticians

# Follow-up to Highly Successful First International Symposium on Forensic Science Error Management (July 21-24, 2015)

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*Proceedings of the International Symposium on Forensic Science Error Management*

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Held July 21-24, 2015 in Arlington, VA



[http://www.nist.gov/director/international\\_forensics\\_home.cfm](http://www.nist.gov/director/international_forensics_home.cfm)

- ***Proceedings being finalized***
  - plan to have out before Feb 2016
- **Website:**
  - [http://www.nist.gov/director/international\\_forensics\\_home.cfm](http://www.nist.gov/director/international_forensics_home.cfm)
    - **Talk slide PDFs**  
(85 available with 2767 slides):  
<http://www.nist.gov/director/orals.cfm>
    - **Recorded Keynote and Plenary Talks**  
(7 videos):  
[http://www.nist.gov/director/recorded\\_symposium\\_sessions.cfm](http://www.nist.gov/director/recorded_symposium_sessions.cfm)
- **Discussing potential 2<sup>nd</sup> meeting in May 2017** (stay tuned)



**September 2015 issue**

Forensic Science International: Genetics

journal homepage: [www.elsevier.com/locate/fsig](http://www.elsevier.com/locate/fsig)



## U.S. initiatives to strengthen forensic science & international standards in forensic DNA

John M. Butler\*

*National Institute of Standards and Technology, Gaithersburg, MD, USA*

**OPEN SOURCE**  
**(freely available)**

- This review article covers recent U.S. activities to strengthen forensic science including the formation of the National Commission on Forensic Science and the Organization of Scientific Area Committees
- DNA documentary standards and guidelines from organizations around the world are also included



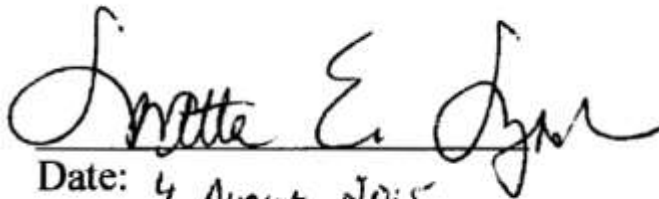
# A Renewal MOU Was Recently Signed between DOJ and NIST

and is publicly available on the NCFS website

## MEMORANDUM OF UNDERSTANDING BETWEEN THE DEPARTMENT OF JUSTICE AND THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY IN SUPPORT OF THE NATIONAL COMMISSION ON FORENSIC SCIENCE AND THE ORGANIZATION OF SCIENTIFIC AREA COMMITTEES

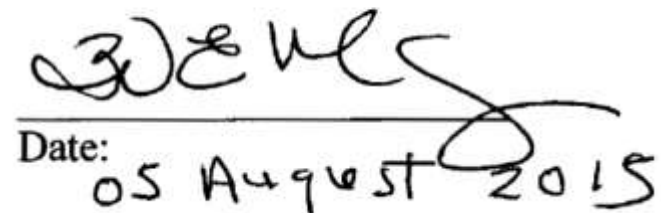
### X. Signatures:

For the Department of Justice:



Date: 4 August 2015

For the National Institute of  
Standards and Technology:



Date: 05 August 2015

# Organization of Scientific Area Committees (OSAC)

Forensic discipline-specific “guidance groups”  
administered by NIST



**NIST**  
National Institute of  
Standards and Technology  
U.S. Department of Commerce

<http://www.nist.gov/forensics/osac/index.cfm>



# Organization of Scientific Area Committees (OSAC)

**364 active projects**

## Forensic Science Standards Board (FSSB)

Legal Resource Committee (LRC)

Quality Infrastructure Committee (QIC)

Human Factors Committee (HFC)

Biology/DNA SAC

Chemistry/Instrumental Analysis SAC

Crime Scene/Death Investigation SAC

**1** Digital/Multimedia SAC

Physics/Pattern Interpretation SAC

Biological Data Interpretation and Reporting Sub

Biological Methods Sub

Wildlife Forensics Sub

**2** Fire Debris and Explosives Sub

**1** Geological Materials Sub

Gunshot Residue Sub

**8** Materials (Trace) Sub

**3** Seized Drugs Sub

**4** Toxicology Sub

Anthropology Sub

Disaster Victim Identification Sub

Dogs and Sensors Sub

Fire and Explosion Investigation Sub

Medicolegal Death Investigation Sub

Odontology Sub

**Crime Scene Sub**

**1** Digital Evidence Sub

**6** Facial Identification Sub

Speaker Recognition Sub

Video/Imaging Technology and Analysis Sub

Bloodstain Pattern Analysis Sub

Firearms and Toolmarks Sub

Footwear and Tire Sub

Forensic Document Examination Sub

Friction Ridge Sub

**Currently 542 total members**

**14 of 26 are ASTM standards**

**Added Dec 2015**

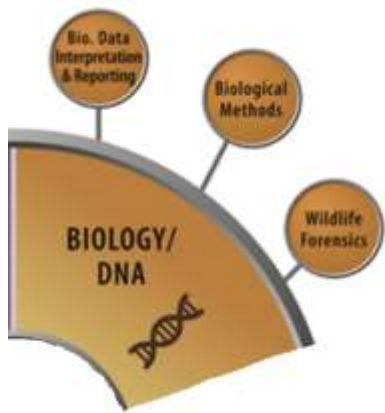
SAC = Scientific Area Committee  
Sub = Subcommittee

# SAC Biology Membership and Initial Terms (2, 3, or 4 years)

Members (Term)	Role
George Herrin (4)	Chair
Angelo Della Manna (3)	Vice-Chair
DeeDee Hawk (2)	Exec Sec
Kim Murga (2)	SC Chair
Robyn Ragsdale (4)	SC Chair
Kathy Moore (2)	SC Chair

Members (Term)	Role
John Butler (3)	QIC Liaison, SWGDM Liaison
Tom Callaghan (3)	
Robin Cotton (4)	LRC Liaison
Phillip Danielson (4)	HFC Liaison
Bruce Weir (3)	
Simone Gittelson (2)	

First public SAC meeting was held **February 16, 2015 7-10pm** at the AAFS meeting  
**Monthly conference calls are conducted to get subcommittee updates**  
 Second public SAC meeting was **October 15, 2015 7:30-8:45am** at the ISHI meeting  
**Next public SAC meeting will be February 22, 2016 10:15am-12pm at AAFS meeting**



# Biology/DNA Scientific Area Committee

3 SWGDAM participants



**George Herrin**  
(chair)

Not pictured: Bruce Weir  
& Simone Gittelson

# Message to SWGDAM

## from George Herrin (SAC Biology Chair)

- **We are very close to pushing 4-5 documents out of the various subcommittees** and up to the SAC for a vote at the end of the month in Leesburg.
- I would like to have the SAC work collaboratively with SWGDAM as they get closer to finalizing the next revision of QAS so that we can avoid potential conflicts.
- **We will be sending notice of the documents to all TL and SWGDAM members after the SAC has reviewed** and decided to move forward with them.
- I appreciate the contributions of those members of SWGDAM who are also serving as OSAC subcommittee members or affiliates.

# SAC Biology/DNA Activity

## Task Groups

Terminology (Buel)

Validation/Method (Weitz)

Education/Training (**Kadash**)

Sample Id & Collection (Zervos)

Terminology (Westring)

Statistical Interpretation (Zabell)

Probabilistic Genotyping (**Sutton**)

Software Validation (**Kehl**)

Mixture Interp Verification (Sobieralski/**Montpetit**)

Terminology (Baker/Hoofer)

Standards and Guidelines (O'Brien/Giles)

Report Writing (Trail/Giles)

Validation (Lindquist/Hoofer)

## Subcommittees

Biological Methods (Murga)

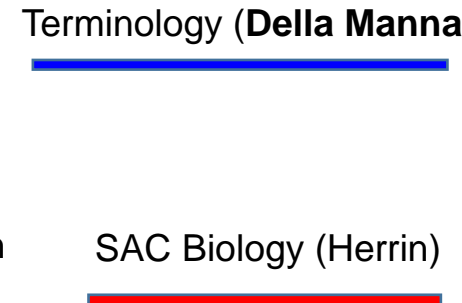
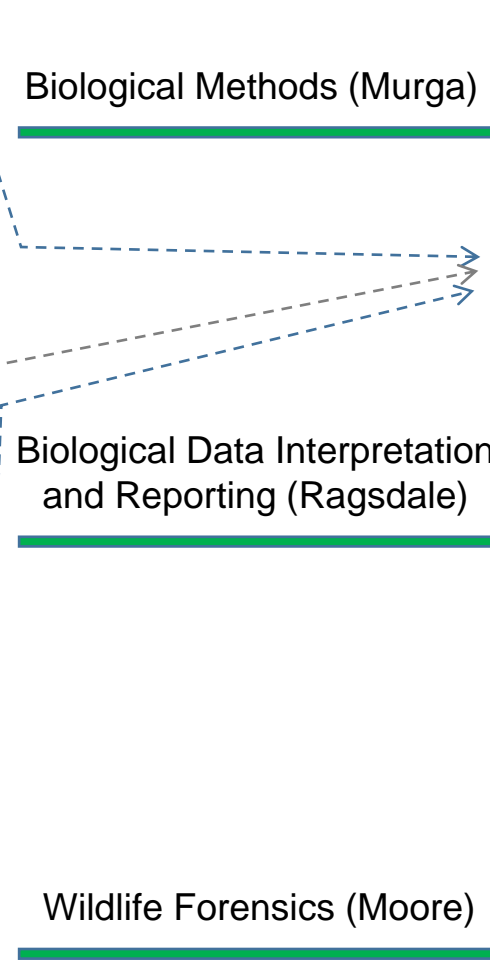
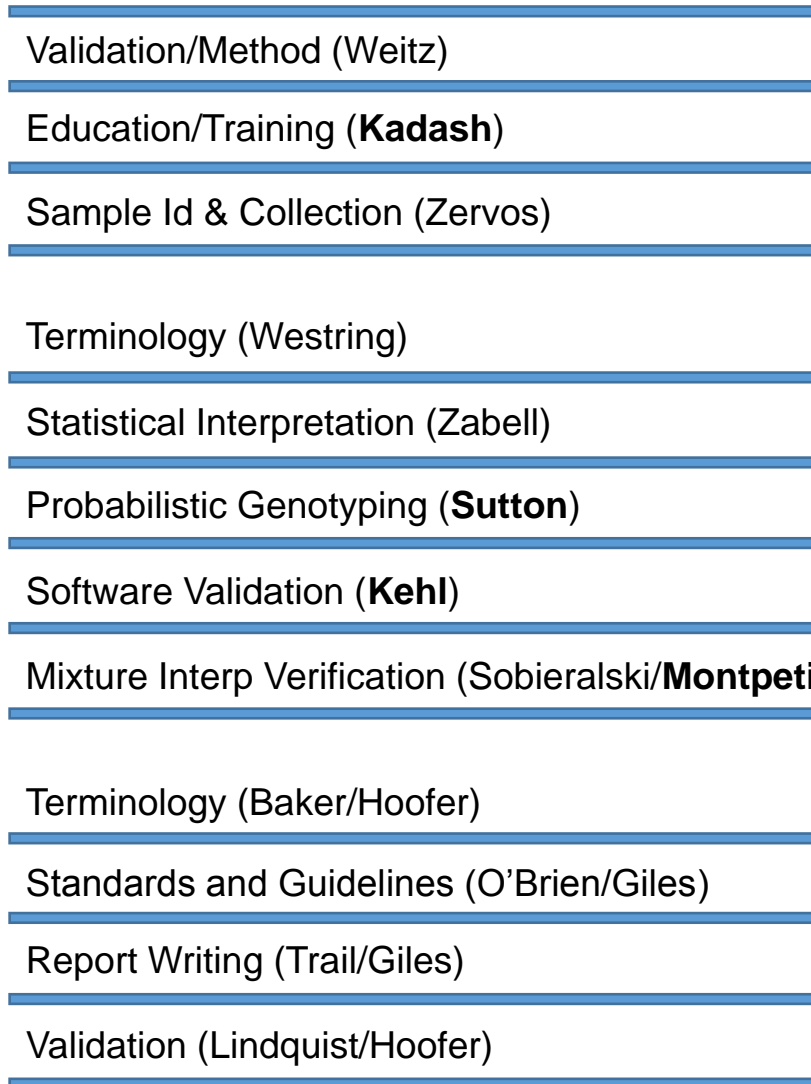
Biological Data Interpretation  
and Reporting (Ragsdale)

Wildlife Forensics (Moore)

## Biology/DNA Scientific Area Committee

Terminology (**Della Manna**)

SAC Biology (Herrin)



# OSAC Forensic Biology Glossary (Terminology) Document Under Review

## Standard Forensic Biology / DNA Glossary

November 2015


[http://media.wix.com/ugd/4344b0\\_da25419ba2dd4363bc4e5e8fe7025882.pdf](http://media.wix.com/ugd/4344b0_da25419ba2dd4363bc4e5e8fe7025882.pdf)

Interpretation Guidelines for Autosomal STR Typing: [http://media.wix.com/ugd/4344b0\\_61b46a0e1a4c41ccb65f719a533b8e29.pdf](http://media.wix.com/ugd/4344b0_61b46a0e1a4c41ccb65f719a533b8e29.pdf)

Validation Guidelines for DNA Analysis Methods: [http://media.wix.com/ugd/4344b0\\_cbc27d16dcb64fd88cb36ab2a2a25e4c.pdf](http://media.wix.com/ugd/4344b0_cbc27d16dcb64fd88cb36ab2a2a25e4c.pdf)

The Biological Evidence Preservation Handbook: Best Practices for Evidence Handlers. 2013. Technical Working Group on Biological Evidence Preservation: <http://www.nist.gov/forensics/upload/NIST-IR-7928.pdf>

Reference to  
SWGDM documents  
is provided

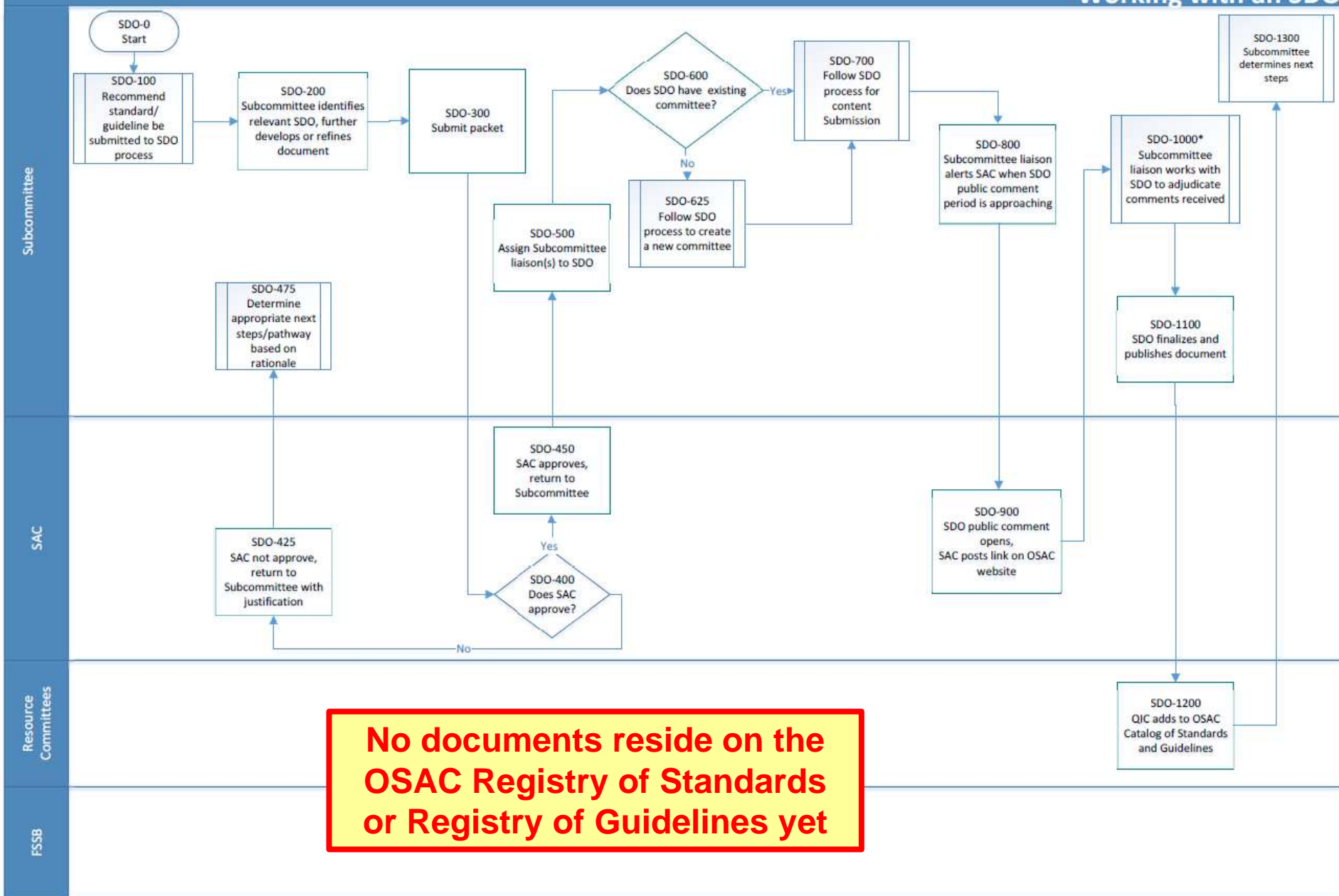
Term	Definition	Source	Document
<b>Accredited Laboratory</b>	A DNA laboratory that has received formal recognition that it meets or exceeds a list of standards, including the FBI Director's Quality Assurance Standards, to perform specific tests, by a nonprofit professional association of persons actively involved in forensic science that is nationally recognized within the forensic community in accordance with the provisions of the Federal DNA Identification Act (42 U.S.C. § 14132) or subsequent laws.	QAS 	
<b>Accuracy</b>	The degree of conformity of a measured quantity to its actual (true) value.	QAS; SWGDM	Validation Guidelines for Forensic DNA Analysis Methods
<b>Additional Amplification Cycles</b>	One or more amplification cycles beyond what the laboratory had validated in the Standard Method of its STR kit.	SWGDM - Modified by OSAC terminology	Guidelines for STR Enhanced Detection Methods

>400 definitions distilled  
from ~1280 terms collected



# OSAC Biology/DNA SAC Summary

- **Regular conference calls (virtual meetings)**
  - SAC and subcommittees each meet at least monthly
  - Task groups meet sometimes multiple times per month
- A public SAC meeting/public comment session was held as part of the ISHI meeting in Grapevine, Texas on October 15, 2015
- The next public SAC meeting is February 22, 2015 as part of the AAFS meeting in Las Vegas, Nevada
- Several documents are close to being completed for submission to a Standards Developing Organization (SDO)
- AAFS is standing up an SDO; the current plan is to use this route for SAC Biology/DNA documents



No documents reside on the OSAC Registry of Standards or Registry of Guidelines yet

# OSAC Quality Infrastructure Committee (QIC) has developed worksheets for documenting efforts

## OSAC Technical Merit Worksheet



This worksheet is intended to assist in reviewing a potential standard or guideline to determine its appropriateness for inclusion on the OSAC Registries. Depending upon the nature of the standard or guideline, not all areas will be applicable. Additional factors may be needed for the evaluation of standards relating to observational- and judgment-based practices or human factors such as training, qualifications, research and quality control.

DATE: \_\_\_\_\_

CHAIR  
Name: \_\_\_\_\_  
Affiliation: \_\_\_\_\_  
Email: \_\_\_\_\_  
Phone: \_\_\_\_\_

## OSAC Harmonization Worksheet



This worksheet must be submitted with your Registry Request Form. The form is intended to assist in the evaluation of potential conflicts with documents currently listed on the OSAC Registries.

DATE: \_\_\_\_\_

CHAIR  
Name: \_\_\_\_\_  
Affiliation: \_\_\_\_\_  
Email: \_\_\_\_\_  
Phone: \_\_\_\_\_

- Document Title, Number, and Year:
1. Are the purpose and scope of the document clear?
  2. Terminology  
Are relevant terms, acronyms, and abbreviations defined?
  3. Bibliographic Referencing  
Does the document contain references to other documents?
  4. Quality Control  
Does the document describe the quality control process?
  5. Is the document a test method or reporting guidelines, method, or procedure?

## OSAC Impact Worksheet



This worksheet must be completed and included with the Registry Request Form if the referenced document is likely to produce a financial, human resource, or other impact on the forensic community.

DATE: \_\_\_\_\_

CHAIR  
Name: \_\_\_\_\_  
Affiliation: \_\_\_\_\_  
Email: \_\_\_\_\_  
Phone: \_\_\_\_\_

- Document Title, Number, and Year:
1. What is the intended use of the document? For example, is this standard for forensic scientists?

## OSAC Standard Development Process Worksheet

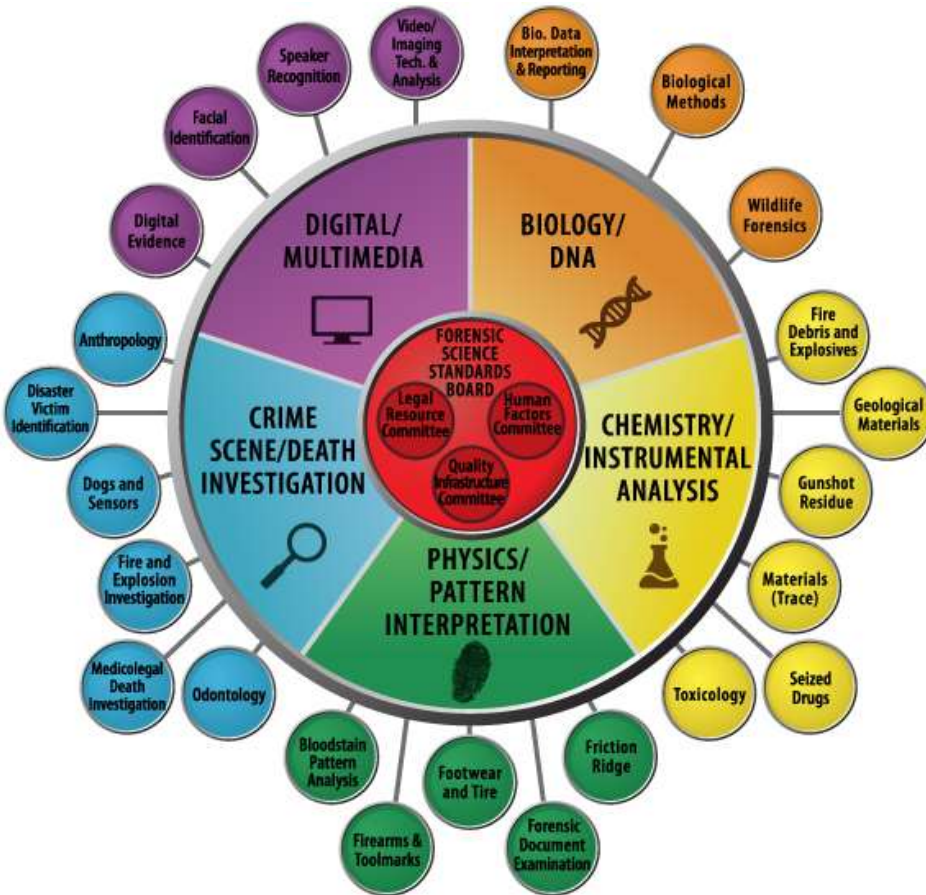


Complete the following worksheet if the standard or guideline submitted for addition to the OSAC Registry was not developed by a recognized standards development organization (SDO) but might meet the process requirements. Provide all documentation to support the responses as attachments.

DATE: _____	SUBMITTING SUBCOMMITTEE: _____
CHAIR Name: _____ Affiliation: _____ Email: _____ Phone: _____	TECHNICAL CONTACT ( If different than Chair ) Name: _____ Affiliation: _____ Email: _____ Phone: _____

- Document Title, Number, and Year: \_\_\_\_\_
1. Was a written procedure used to govern the creation of this standard or guideline?  
 Yes  No (If "No", describe below)

# Upcoming OSAC Events



- **January 25-29, 2016** – Second in-person meeting of OSAC subcommittees (Leesburg, VA)
- **February 22-23, 2016** – Second public meeting with presentations by SAC and subcommittee chairs in Las Vegas, NV as part of AAFS

***January 2016 – first posting to OSAC Registry of Approved Standards (anticipated for 5 documents that have been out for public comment)***

# OSAC Monthly Newsletter



## Issues (to-date)

- August 2015
- Sept 2015
- Oct 2015
- Nov 2015
- Dec 2015

One of the ways to solicit public comment on standards and guidelines up for consideration on the OSAC Registries

<http://nist.gov/forensics/osac/osac-newsletter.cfm>



**Based on current funding**  
**OSAC in-person meetings are on a ~9 month cycle**  
(January – July/August – April – January ...)

## **Internal OSAC Meetings**

(Leesburg, VA) – January 25-29, 2016

- (Jan 25) FSSB meeting
- (Jan 26) 5 SACs, 3 Resource Committees & several subcommittees
- (Jan 27) full OSAC plenary followed by 24 SCs, 3 RC meetings
- (Jan 28) 24 SCs, 3 RC meetings
- (Jan 29) ½ day 24 SCs



# Public OSAC Meetings (at AAFS, Las Vegas, NV)

## February 22, 2016 (Monday)

(8 am – 10 am) **Digital/Multimedia SAC**

- Digital Evidence
- Facial Identification
- Video/Imaging Technology and Analysis
- Speaker Recognition

(10:15 am – 12 pm) **Biology/DNA SAC**

- Biological Methods
- Biological Data Interpretation & Reporting
- Wildlife Forensics

(1 pm – 5 pm) **Crime Scene/Death Investigation SAC**

- Anthropology
- Disaster Victim Identification
- Dogs and Sensors
- Fire and Explosion
- Medicolegal Death Investigation
- Odontology

## February 23, 2016 (Tuesday)

(8:30 am – 12 pm) **Physics/Pattern Interpretation SAC**

- Bloodstain Pattern Analysis
- Firearms and Toolmarks
- Footwear and Tire
- Forensic Document Examination
- Friction Ridge

(1 pm – 5 pm) **Chemistry/Instrumental Analysis SAC**

- Fire Debris and Explosives
- Geological Materials
- Gunshot Residue
- Materials (Trace)
- Seized Drugs
- Toxicology

**5 SAC chairs and 24 subcommittee chairs will present; will be webcast**

# National Commission on Forensic Science

A Federal Advisory Committee  
for the U.S. Department of Justice



U.S. Department of Commerce

<http://www.justice.gov/ncfs>

# National Commission on Forensic Science (NCFS)

[www.justice.gov/ncfs](http://www.justice.gov/ncfs)

**Policy-focused**

**NCFS Leadership**

In 2013, the Department of Justice (DOJ) established the National Commission on Forensic Science, in partnership with the National Institute of Standards and Technology (NIST), to enhance the practice and improve the reliability of forensic science. This unique partnership draws upon each agency's core strengths to promote scientific validity, reduce fragmentation, and improve federal coordination of forensic science.

The Commission is co-chaired by Deputy Attorney General James M. Cole and NIST Acting Director and Acting Under Secretary of Commerce for Standards and Technology, Willie E. May. Nelson Santos, Deputy Assistant Administrator for the Office of Forensic Sciences at the Drug Enforcement Administration, and John M. Butler, Special Assistant to the NIST Director for forensic science, serve as vice-chairs. Brette Steele, Senior Advisor on Forensic Science and Senior Counsel to the Deputy Attorney General serves as the Designated Federal Officer and Robin Jones, Consultant within the Department of Justice, serves as Program Manager.

The Commission includes federal, state and local forensic science service providers; research scientists and academics; law enforcement officials; prosecutors, defense attorneys and judges; and other stakeholders from across the country.

**GENERAL INFORMATION**  
NATIONAL COMMISSION ON FORENSIC SCIENCE

**CONTACT**

**Brette Steele**  
Brette.L.Steele@usdoj.gov

**By Phone:**  
(202) 305-0180

**32 voting and 8 *ex-officio* members**

**Last meeting (8<sup>th</sup>): Dec 7-8, 2015**

**Next meeting (9<sup>th</sup>): March 21-22, 2016**



**Sally Q. Yates**  
Deputy Attorney General  
**DOJ Co-Chair**



**Willie E. May**  
Director of NIST  
**NIST Co-Chair**



**Nelson A. Santos**  
Vice-Chair (DOJ)



**John M. Butler**  
Vice-Chair (NIST)

# New Commissioners for Second Term

1. **Thomas D. Albright, Ph.D.**, Professor and Conrad T. Prebys Chair, The Salk Institute for Biological Studies, La Jolla, California
2. **Arturo Casadevall, M.D., Ph.D.**, Bloomberg Distinguished Professor and Alfred and Jill Summer Professor and Chair of Molecular Microbiology and Immunology, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, Maryland
3. **Gregory C. Champagne**, Sheriff, St. Charles Parish, Louisiana

**Will be looking for a new digital evidence member...**

5. **Deirdre M. Daly**, United States Attorney for the District of Connecticut
6. **Sunita Sah, M.D., Ph.D.**, Assistant Professor of Management and Organizations, Johnson Graduate School of Management, Cornell University, Ithaca, New York

Press Release (August 6, 2015): <http://www.justice.gov/opa/pr/departments-justice-and-national-institute-standards-and-technology-name-six-experts-new>

# Current NCFS Subcommittees

<http://www.justice.gov/ncfs/subcommittees>

*where much of the Commission work occurs...*

NCFS Subcommittee	# Commissioners	# Non-Commissioners
1. <b>Accreditation &amp; Proficiency Testing</b>	8	13
2. <b>Human Factors</b>	7	16
3. <b>Interim Solutions</b>	11	2
4. <b>Medicolegal Death Investigation</b>	7	7
5. <b>Reporting &amp; Testimony</b>	13	9
6. <b>Scientific Inquiry &amp; Research</b>	12	5
7. <b>Training on Science &amp; Law</b>	7	5

*Most Commissioners are on multiple subcommittees*

**57 non-Commissioners** contributing to the process

***Subcommittee products are discussed and voted on by the full Commission prior to being recommended to the Attorney General***

# Timeline for Commission Activities

**Federal Advisory  
Committees exist on a  
2-year renewal cycle**

**New Commission  
charter signed on  
April 23, 2015**

**Includes digital  
evidence**

**While we hope that a new  
charter will be signed in  
April 2017 extending  
the NCFS, a new  
administration  
will begin January 20, 2017  
and may have different  
priorities**

- Announcement at AAFS 2013 meeting (February 21, 2013)
- Commission charter filed (April 23, 2013)
- Commission membership named (January 10, 2014)

## Term 1 (April 23, 2013 – April 23, 2015):

- *First* meeting (February 3-4, 2014)
- *Second* meeting (May 12-13, 2014)
- *Third* meeting (August 26-27, 2014)
- *Fourth* meeting (October 28-29, 2014)
- *Fifth* meeting (January 29-30, 2015)

## Term 2 (April 23, 2015 – April 23, 2017):

- *Sixth* meeting (April 30-May 1, 2015)
- *Seventh* meeting (August 10-11, 2015)
- *Eighth* meeting (December 7-8, 2015)
- ***Ninth* meeting (March 21-22, 2016)**
- *Tenth* meeting (June 20-21, 2016)
- *Eleventh* meeting (Sept 12-13, 2016)
- *Twelfth* meeting (January 9-10, 2017)
- *Thirteenth* meeting (April 10-11, 2017)



# Commission Meetings Relative to SWGDAM

## **SWGDAM talk (January 9, 2014)**

- Commission membership named (January 10, 2014)
- *First* Commission meeting (February 3-4, 2014)
- *Second* Commission meeting (May 12-13, 2014)

## **SWGDAM talk (July 17, 2014)**

- *Third* Commission meeting (August 26-27, 2014)
- ISHI meeting presentation (October 1, 2014)
- World Forensics Festival talk (October 14, 2014)
- *Fourth* Commission meeting (October 28-29, 2014)

## **SWGDAM talk (January 15, 2015)**

- *Fifth* Commission meeting (January 29-30, 2015)
- *Sixth* Commission meeting (April 30-May 1, 2015)

## **SWGDAM talk (July 16, 2015)**

- *Seventh* Commission meeting (August 10-11, 2015)
- *Eighth* Commission meeting (December 7-8, 2015)

## **SWGDAM talk (January 14, 2016)**

# NCFS Outside Speaker Panel Discussions

Meeting	Topics
1	Background on NRC 2009 report, 2009 census of public labs, & SoFS efforts
2	Ethics and Forensic Science
2, 3	Cognitive Bias and Human Factors (part 1 & part 2)
3	Latent Print Automated Fingerprint Identification System (AFIS) Interoperability
3	Role of Accreditation in Forensic Science
4	Assessing Eyewitness Identification (NRC report)
5	<b>Documentary Standards</b>
5	Judicial Training
5	Accreditation and Certification within the MDI Community
6	Evidence Preservation and Retention
6	OSAC Update and Priority Action Report
6	Disaster Victim Identification within the MDI Community
7	<b>Exploring Issues Related to Proficiency Testing</b>
8	Translation of Scientific Research into Forensic Practice
8	AAAS Forensic Science Assessments: A Quality & Gap Analysis

**International Perspectives**

**Meeting 3: UK Regulator**

**Meeting 7: Netherlands Register of Court Experts**

# Designated Federal Official (DFO) for the National Commission on Forensic Science



**Andrew J. Bruck**

Andrew J. Bruck  
Counsel to the Deputy Attorney General  
950 Pennsylvania Avenue NW  
Washington, DC 20530  
[Andrew.J.Bruck@usdoj.gov](mailto:Andrew.J.Bruck@usdoj.gov)  
(202) 305-3481

# Subcommittee on Procedures and Operations (SPO) – formerly Bylaws

- **Purpose:** to define/refine process documents and bylaws governing Commission activities
- **SPO Membership:**
  - DFO: Andrew Bruck
  - Vice-Chairs: Nelson Santos & John Butler
  - OSTP representative: Meredith Drosback (replaced Tania Simoncelli)
  - Commission representatives (4):
    - Marilyn Huestis (researcher)
    - Dean Gialamas (practitioner)
    - Pam King (defense attorney → MN district judge)
    - Matt Redle (prosecuting attorney)

# Commission Work Products

- The Commission is a Department of Justice Federal Advisory Committee and therefore **only has direct authority to make recommendations to the Attorney General.**

**DOJ has promised to respond to NCFS work products within two meetings**

- It is hoped that Commission work products will be considered and adopted by other Federal agencies and within state and local jurisdictions.

**Voting is conducted electronically with a **two-thirds majority** required to pass**



# NCFS Work Products Page

The screenshot shows the website for the National Commission on Forensic Science (NCFS) under the Department of Justice. The header includes the Department of Justice logo and name, a search bar, and social media icons. The main navigation menu includes Home, About, Agencies, Business, Resources, News, Careers, and Contact. The breadcrumb trail reads "Home » National Commission on Forensic Science".

On the left side, there is a vertical menu with the following items: National Commission on Forensic Science Home, Members, Meetings, **Work Products**, Subcommittees, Press Room, and Contact the Commission. The "Work Products" item is highlighted with a blue arrow.

The main content area features a dark blue header with the text "WORK PRODUCTS". Below this header, there is a yellow box with the text "Sign up for Email Updates" and a red arrow pointing to the "Email updates" link. The "Email updates" link is accompanied by an envelope icon.

Below the "Email updates" link, there are several links to PDF documents:

- Process for the Development of Work Products (PDF)
- Guidance for the Adjudication of Public Comments (PDF)

Further down, there is a section titled "ACCREDITATION OF MEDICAL EXAMINER AND CORONER OFFICES" with a dark blue header. Below this header, there are three links:

- Initial Draft Policy Recommendation on Accreditation and Certification of Medicolegal Death Investigation Personnel Released for Public Comment
- Final Draft Policy Recommendation on Accreditation of Medical Examiner and Coroner Offices as Submitted for Vote
- Policy Recommendation on Accreditation of Medical Examiner and Coroner Offices as Adopted by the Commission

<http://www.justice.gov/ncfs/work-products>



# NCFS Meetings Page

The screenshot shows the top portion of the Department of Justice website. At the top left is the Department of Justice seal. To its right is the text "THE UNITED STATES DEPARTMENT OF JUSTICE". Further right are social media icons for Twitter, Facebook, YouTube, RSS, and Email, along with the text "en ESPAÑOL". A search bar is located on the far right of the top navigation bar. Below the navigation bar is a horizontal menu with links: HOME, ABOUT, AGENCIES, BUSINESS, RESOURCES, NEWS, CAREERS, CONTACT. The main content area has a breadcrumb trail: "Home » National Commission on Forensic Science". On the left side, there is a vertical navigation menu with links: National Commission on Forensic Science Home, Members, Meetings (expanded), Meeting Materials, Written Public Comments, Work Products, Subcommittees, Press Room, and Contact the Commission. The "MEETINGS" section is highlighted in black with white text. Below it, there is a yellow banner with a red arrow pointing to the text "Sign up for Email Updates" and an email icon. Below the banner are links for "Meeting One" through "Meeting Nine". The "MEETING ONE" section is also highlighted in black with white text. The main text of the page describes the first meeting of the National Commission on Forensic Science, held on February 3-4, 2014, in Washington, DC. On the right side, there is a box containing "GENERAL INFORMATION NATIONAL COMMISSION ON FORENSIC SCIENCE" and "CONTACT" information for Andrew J. Bruck, including his email address and phone number.

Home » National Commission on Forensic Science

National Commission on Forensic Science Home

Members

▼ Meetings

Meeting Materials

Written Public Comments

Work Products

Subcommittees

Press Room

Contact the Commission

**MEETINGS**

Email updates

**Sign up for Email Updates**

Meeting One | Meeting Two | Meeting Three | Meeting Four | Meeting Five | Meeting Six | Meeting Seven | Meeting Eight | Meeting Nine

**MEETING ONE**

The first meeting of the National Commission on Forensic Science was held February 3 - 4, 2014 in Washington, DC. On February 3, the meeting was called to order at 9:00 a.m. The meeting began with communicating administrative, operational, and procedural information to the Commission members. Welcoming remarks were delivered by the co-chairs, Deputy Attorney General James M. Cole and Under Secretary of Commerce for Standards and Technology and NIST Director Patrick D. Gallagher. Dr. John Holdren, Science Advisor to the President and Director of the Office of Science and Technology Policy also provided welcoming remarks to the Commission. The afternoon included presentations from Judge Harry Edwards on reflections from the NRC report on "Strengthening Forensic Science in the United States" and Matt DuRose of the Bureau of Justice Statistics on the Census of Publicly Funded Crime Laboratories. Background presentations on accreditation, certification, proficiency testing, and research were also provided to the Commission. The afternoon closed with a one-hour public

**GENERAL INFORMATION**  
NATIONAL COMMISSION  
ON FORENSIC SCIENCE

**CONTACT**

**Andrew J. Bruck**  
Andrew.J.Bruck@usdoj.gov  
(202) 305-3481  
Submitting Public Comments

<http://www.justice.gov/ncfs/meetings>

# NCFS Email Updates - *GovDelivery*



THE UNITED STATES  
DEPARTMENT *of* JUSTICE

Email Updates hosted by *govDELIVERY*

### Keep Informed with Email Updates

The Department of Justice (DOJ) is pleased to offer a free e-mail subscription service through our contractor GovDelivery. This service allows you to receive notifications by e-mail when new information is available on pages you specify on Department of Justice websites. If you sign up for these automatic updates, you will no longer need to check those pages for changes. You may unsubscribe from this service at any time.

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# We Encourage Public Comments

- Individuals wishing to submit written public comment regarding draft work products should do so by going to [www.regulations.gov](http://www.regulations.gov)
- Work products are made available to Commissioners and to the general public at least 15 days before the next meeting and public comments can also be provided 15 days after a meeting (**30 days total**)



Initial DRAFT Views Document on Testimony Using the Term Scientific Certainty

Other by DOJ on 04/15/2015 ID: DOJ-LA-2015-0004-0008

[Comment Now!](#)

Due May 15, 2015 11:59 PM ET

[Open Docket Folder](#)

# NCFS Meeting 7 Topics

August 10-11, 2015

- **Subcommittee Reports & Work Product Discussion**
  - **Five final work products were approved**
- Briefing on Ethics and the Special Government Employee
- **Panel on** Exploring Issues Related to Proficiency Testing
  - Speakers: Brady Mills, Christopher Czyryca, Jesse Brown
- **Presentation on** The Netherlands Register of Court Experts: Experiences and Challenges toward a Forensic Science Quality System
  - Speaker: Michael Smithuis

# NCFS Meeting 8 Topics

December 7-8, 2015

- **Subcommittee Reports & Work Product Discussion**
  - **Three final work products were approved**
- OSAC Update
  - Speaker: Jeremy Triplet
- **Panel on Translation of Scientific Research into Practice**
  - Speakers: Molly Dix (RTI), Fen Zhao (NSF), Peter Marks (FDA), Jennifer Shieh (NIH)
- **Presentation on AAAS Forensic Science Assessments**
  - Speakers: Mark Frankel and Deborah Runkle

# Work Products Adopted by the Commission

1. Survey of Law Enforcement Forensic Units
2. Accreditation of Medical Examiner and Coroner Offices
3. Certification of Medicolegal Death Investigators
4. Scientific Literature in Support of Forensic Science and Practice
5. Inconsistent Terminology
- 6. Universal Accreditation**
7. Forensic Science and Related Terms
8. Automated Fingerprint Identification System (AFIS) Interoperability
9. Root Cause Analysis (RCA) in Forensic Science
10. Pretrial Discovery of Forensic Materials
11. Increasing the Number, Retention, and Quality of Board-Certified Forensic Pathologists
12. Electronic Networking of Medical Examiner and Coroner Offices
13. Documentation, Case Record and Report Contents
14. Ensuring that Forensic Analysis is Based Upon Task-Relevant Information
15. Forensic Science Curriculum Development



# DOJ Press Release (December 7, 2015)

## JUSTICE NEWS

Department of Justice

Office of Public Affairs

FOR IMMEDIATE RELEASE

Monday, December 7, 2015

### **Justice Department Announces New Accreditation Policies to Advance Forensic Science**

Deputy Attorney General Sally Quillian Yates announced today that the Justice Department will, within the next five years, require department-run forensic labs to obtain and maintain accreditation and require all department prosecutors to use accredited labs to process forensic evidence when practicable. Additionally, the department has decided to use its grant funding mechanisms to encourage other labs around the country to pursue accreditation.

The new policies arose out of recommendations made by the National Commission of Forensic Science (NCFS), which was established to advance the field of forensic science and make suggestions to the Attorney General on how to ensure that reliable and scientifically valid evidence is used when solving crimes. The Attorney General made the decision to implement several of the commission's recommendations last week and the Deputy Attorney General, who serves as co-chair of the NCFS, announced their adoption at a meeting of the commission today.

<http://www.justice.gov/opa/pr/justice-department-announces-new-accreditation-policies-advance-forensic-science>



Office of the Attorney General  
Washington, D. C. 20530

November 23, 2015

**DEPARTMENT**

**MEMORANDUM FOR HEADS OF ~~DEPARTMENT~~ COMPONENTS**

FROM:

Loretta E. Lynch  
Attorney General

A handwritten signature in blue ink that reads "Loretta E. Lynch".

SUBJECT:

Recommendations of the National Commission on Forensic Science  
Announcement for NCFS Meeting Eight

Our justice system depends on reliable, scientifically valid evidence. For the past two years, the National Commission on Forensic Science (NCFS) has developed recommendations for how the Department of Justice can strengthen the field of forensic science. The Department is reviewing those recommendations on a rolling basis, and will continue to evaluate proposals as they are approved by the NCFS.

<http://www.justice.gov/opa/file/797541/download>

**NCFS Work Products – Drafts were open for public comment (Nov 23 – Dec 22, 2015)**

**Will be voted on at the March 21-22, 2016 NCFS meeting**

1. Proficiency Testing in Forensic Science
2. Critical Steps to Accreditation
3. National Code of Professional Responsibility
4. Transparency of Quality Management System Documents
- 5. Testimony Using the Term “Reasonable Degree of Scientific Certainty”**
6. Funding for Post-Doctoral Projects to Facilitate Translation of Research into Forensic Science Practice
7. Establishing the Foundational Literature within the Forensic Science Disciplines

# NCFS Work Products/Topics Under Development

1. Accessibility of Scientific Literature
2. Evaluating the Effectiveness of Scientific Procedures and Practices
- 3. Validation of Test Methods**
4. Role of Accreditation in Forensic Education
5. Training Assessment Tools
6. Training on Notification
7. Assessment of Context Management Systems
8. Checklists to Reduce Bias
9. National Call Center
10. Model Legislation for Medical Examiner and Coroner Jurisdictions
11. Medicolegal Autonomy and Independence
12. Uniform Policies and Procedures for Accreditation Programs
13. Analyst Certification
- 14. Need for Research to Improve Quality of Proficiency Tests**
- 15. Data Collection and Collaboration with Proficiency Test Providers**
16. Accreditation and Digital Evidence
17. Presentation of Expert Testimony
18. Access to Expert Witnesses by Defense
19. Judicial Vouching
20. Notice and Demand Rules
- 21. Probabilistic Statements**
22. Pretrial Discovery
23. Report Content – Case File
24. Evidence Preservation and Retention

# NCFS Meeting Dates

- Meeting 8: December 7 – 8, 2015
  - Location: House of Sweden, Washington, DC

## **FUTURE DATES** – LOCATIONS TBD

- Meeting 9: March 21 – 22, 2016
- Meeting 10: June 20 – 21, 2016
- Meeting 11: September 12 – 13, 2016
- Meeting 12: January 9 – 10, 2017
- Meeting 13: April 10 – 11, 2017

## CONTINGENT UPON CHARTER RENEWAL

- Meeting 14: July 17 – 18, 2017
- Meeting 15: November 6 – 7, 2017

Other Past  
and Future  
NIST Activities

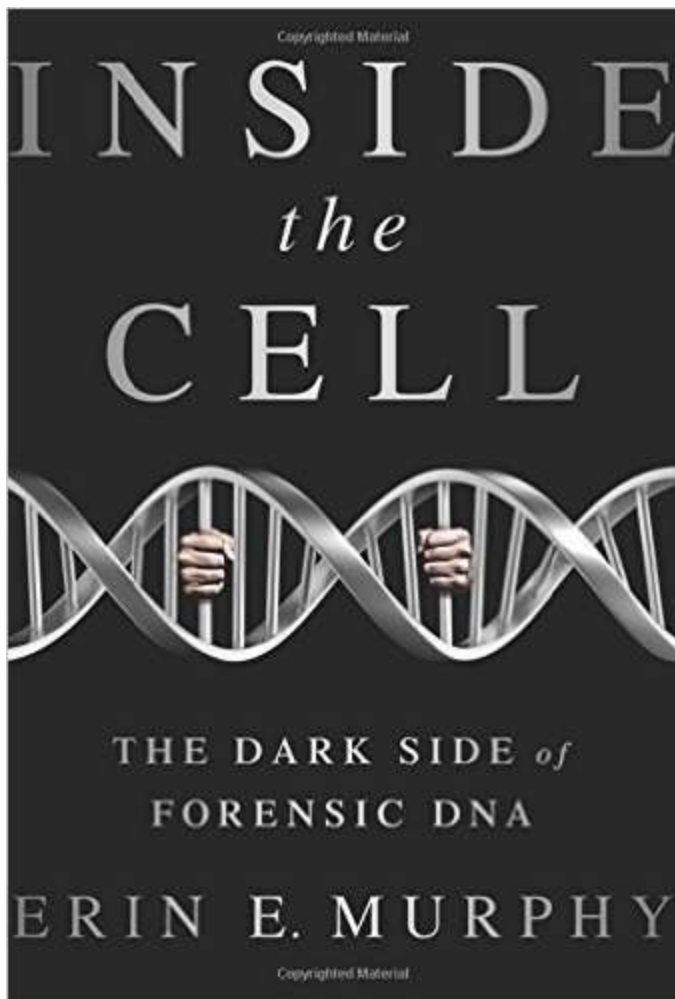


# FSI Genetics Special Issue (Vol. 18, September 2015)

Author(s)	Article Title (Invited Review Articles)
John Butler	U.S. initiatives to strengthen forensic science & international standards in forensic DNA
Titia Sijen	Molecular approaches for <b>forensic cell type identification</b> : on mRNA, miRNA, DNA methylation, and microbial markers
Manfred Kayser	<b>Forensic DNA phenotyping</b> : predicting human appearance from crime scene material for investigative purposes
Chris Phillips	Forensic genetic analysis of <b>bio-geographical ancestry</b>
Robin Cotton & Matthew Fisher	<b>Properties of sperm and seminal fluid</b> , informed by research on reproduction and contraception
Claus Børsting & Niels Morling	<b><u>Next generation sequencing</u></b> and its applications in forensic genetics
Erica Romsos & Peter Vallone	<b>Rapid PCR of STR markers</b> : applications to human identification
Peter Gill et al.	<b>Genotyping and interpretation of STR-DNA</b> : low-template, mixtures and database matches – 20 years of research and development
K. Gettings et al.	<b><u>STR allele sequence variation</u></b> : current knowledge and future issues
Just, Irwin, Parson	<b>Mitochondrial DNA heteroplasmy</b> in the emerging field of <u>massively parallel sequencing</u>
Toni Diegoli	Forensic typing of short tandem repeat markers on the <b>X and Y chromosomes</b>
Ogden & Linacre	<b>Wildlife forensic science</b> : a review of genetic geographic origin assignment
Maria Brión et al.	<u>Massive parallel sequencing</u> applied to the <b>molecular autopsy</b> in sudden cardiac death in the young

# New Book by Law Professor Erin Murphy

400 pages



(Nation Books, Oct 2015)

PART I	
<u>WHEN A MATCH ISN'T A MATCH: HOW DNA TESTING GOES WRONG</u>	
1. The Basics: DNA Typing for Dummies	3
2. The Dirty Business of Crime: The Challenge of Forensic Samples	18
3. Phantom Suspects: The Prevalence of DNA Transfer	29
4. Contamination, Mistake, and Outright Fraud	48
5. Single Cell Samples: Low Copy Number DNA	74
PART II	
<u>MISUNDERSTOOD MATCHES: HOW DNA STATISTICS MISLEAD</u>	
6. Brave New World of Probabilities	85
7. Dangers of the Database: Cold Hits and Coincidental Matches	106
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9.	
PART IV	
<u>BUILDING A BETTER DNA POLICY</u>	
16. The Road to Reform: Efficiency, Accountability, Accuracy, Privacy, and Equality	265
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<i>Conclusion</i>	311
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<i>Glossary</i>	315
<i>Appendix: The Mechanics of DNA Testing</i>	321
<i>Notes</i>	335
<i>Index</i>	373

# The Diane Rehm Show

(in NPR studio on Dec 16, 2015)

**John M. Butler**  
NIST

**Daniele Podini**  
GWU Forensic Science Program

Also on air via phone or Skype  
**Erin Murphy** (NYU School of Law)  
**Mitch Morrissey** (Denver DA)

<https://thedianerehmshow.org/shows/2015-12-16/new-questions-about-the-use-of-forensic-dna> (listen to broadcast or read transcript)

# AAFS 2016 Workshop on Forensic Science Literature



W1: Information Does Exist Beyond the  
First Page of Your Google® Search!  
American Academy of Forensic Sciences  
Las Vegas, NV (February 22, 2016)



**Information Does Exist Beyond the  
First Page of Your Google® Search!**  
Tools and Strategies for Forensic Science  
Literature Searching and Use

**Chair: John M. Butler**  
**Co-Chair: Matthew R. Wood**





# Transformation: Embracing Change

AAFS  
2016  
Plenary  
Session

## An International Panel Discussion on the Impact of Recent Forensic Science Initiatives and the Response of the Global Community

**NCFS Co-Chair**



**Sally Q. Yates, JD**  
U.S. Department  
of Justice  
Washington, DC

### *Plenary Program Speakers*



**Gillian Tully, PhD**  
Forensic Science  
Regulator,  
UK Home Office  
UNITED KINGDOM



**Alastair Ross, AM**  
National Institute of  
Forensic Science,  
*Retired*  
AUSTRALIA



**Reinout Woittiez, PhD**  
Netherlands  
Forensic Institute  
NETHERLANDS

**NCFS Co-Chair**



**Willie E. May, PhD**  
National Institute of  
Standards and  
Technology  
Gaithersburg, MD



**Victor W. Weedn, MD, JD**  
**AAFS President**  
George Washington University  
Department of Forensic Sciences  
Washington, DC



**Moderator:**  
**John M. Butler, PhD**  
NIST

**NCFS Vice-Chair**

# Talk Planned for AAFS 2016



LW1: Last Word Society  
American Academy of Forensic Sciences  
Las Vegas, NV (February 25, 2016)



## The Best Forensic Scientist You've Never Heard Of

**Kristen M. Frederick-Frost, PhD**

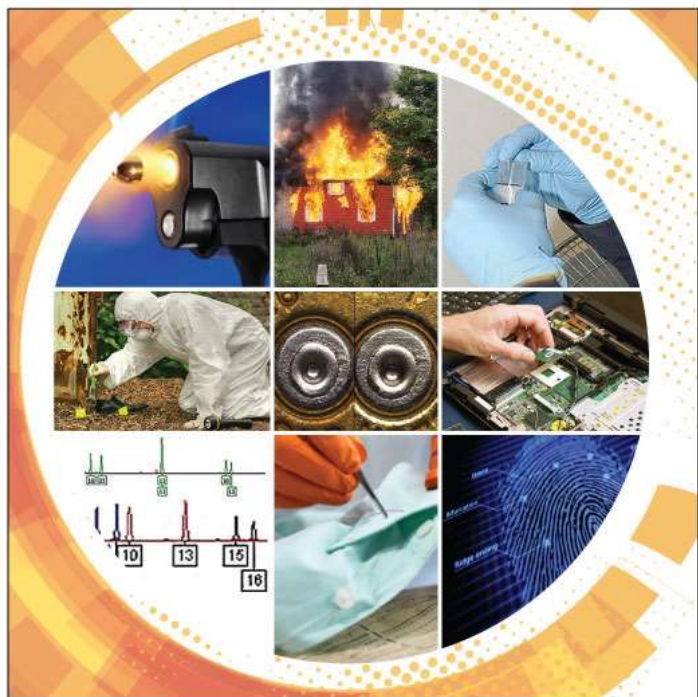
**Robert M. Thompson, BS**

**John M. Butler, PhD**





# Biannual Conference to Showcase NIST Research



**FORENSICS @ NIST**

**Previous Meetings:**

**November 28-30, 2012 at NIST**

**December 3-4, 2014 at NIST**

**Next Meeting:**

**November 8-9, 2016**

**Gaithersburg, MD**

<http://www.nist.gov/oles/forensics-2012.cfm>

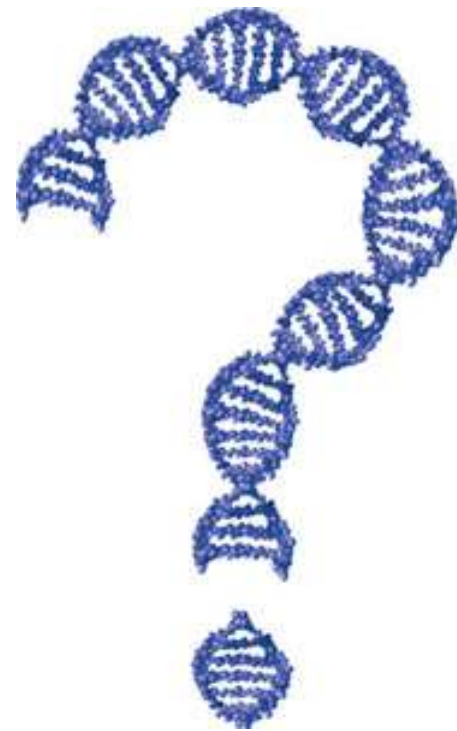
<http://www.nist.gov/forensics/forensics-at-nist-2014.cfm>

**National Commission on Forensic Science (NCFS):**  
[www.justice.gov/ncfs](http://www.justice.gov/ncfs)

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



[www.nist.gov/forensics](http://www.nist.gov/forensics)



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