

Calendar No. 619

113TH CONGRESS
2D SESSION**S. 2022**

To establish scientific standards and protocols across forensic disciplines,
and for other purposes.

IN THE SENATE OF THE UNITED STATES

FEBRUARY 12, 2014

Mr. ROCKEFELLER (for himself and Mr. BLUMENTHAL) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

DECEMBER 8, 2014

Reported by Mr. ROCKEFELLER, with an amendment

[Strike out all after the enacting clause and insert the part printed in *italic*]

A BILL

To establish scientific standards and protocols across forensic
disciplines, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

4 (a) ~~SHORT TITLE.~~—This Act may be cited as the

5 ~~“Forensic Science and Standards Act of 2014”.~~

1 (b) TABLE OF CONTENTS.—The table of contents of
 2 this Act is as follows:

See. 1: Short title; table of contents.
 See. 2: Findings.
 See. 3: Definitions.
 See. 4: National forensic science research program.
 See. 5: Forensic science research grants program.
 See. 6: Forensic science research challenges.
 See. 7: Forensic science standards.
 See. 8: Forensic Science Advisory Committee.
 See. 9: Adoption, accreditation, and certification.
 See. 10: National Institute of Standards and Technology functions.

3 **SEC. 2. FINDINGS.**

4 Congress finds that—

5 (1) at the direction of Congress, the National
 6 Academy of Sciences led a comprehensive review of
 7 the state of forensic science and issued its findings
 8 in a 2009 report, “Strengthening Forensic Science
 9 in the United States: A Path Forward”;

10 (2) the report’s findings indicate the need for
 11 independent scientific research to support the foun-
 12 dation of forensic disciplines;

13 (3) the report stresses the need for standards
 14 in methods, data interpretation, and reporting, and
 15 the importance of preventing cognitive bias and miti-
 16 gating human factors; and

17 (4) according to the report, forensic science re-
 18 search is not financially well supported, and there is
 19 a need for a unified strategy for developing a foren-
 20 sic science research plan across Federal agencies.

1 **SEC. 3. DEFINITIONS.**

2 In this Act:

3 (1) **ADVISORY COMMITTEE.**—The term “Advi-
4 sory Committee” means the Forensic Science Advi-
5 sory Committee established under section 8.

6 (2) **COORDINATING OFFICE.**—The term “Co-
7 ordinating Office” means the National Forensic
8 Science Coordinating Office established under sec-
9 tion 4.

10 (3) **FORENSIC SCIENCE.**—

11 (A) **IN GENERAL.**—The term “forensic
12 science” means the basic and applied scientific
13 research applicable to the collection, evaluation,
14 and analysis of physical evidence, including dig-
15 ital evidence, for use in investigations and legal
16 proceedings, including all tests, methods, meas-
17 urements, and procedures.

18 (B) **APPLIED SCIENTIFIC RESEARCH.**—In
19 subparagraph (A), the term “applied scientific
20 research” means a systematic study to gain
21 knowledge or understanding necessary to deter-
22 mine the means by which a recognized and spe-
23 cific need may be met.

24 (C) **BASIC SCIENTIFIC RESEARCH.**—In
25 subparagraph (A), the term “basic scientific re-
26 search” means a systematic study directed to-

ward fuller knowledge or understanding of the
 fundamental aspects of phenomena and of ob-
 servable facts without specific applications to-
 wards processes or products.

(4) **STANDARDS DEVELOPMENT ORGANIZA-
 TION.**—The term “standards development organiza-
 tion” means a domestic or an international organiza-
 tion that plans, develops, establishes, or coordinates
 voluntary consensus standards using procedures that
 incorporate openness, a balance of interests, con-
 sensus, due process, and an appeals process.

**SEC. 4. NATIONAL FORENSIC SCIENCE RESEARCH PRO-
 GRAM.**

(a) **ESTABLISHMENT.**—There shall be a national fo-
 rensic science research program to improve, expand, and
 coordinate Federal research in the forensic sciences.

(b) **NATIONAL ACADEMY OF SCIENCES REPORT ON
 FORENSIC SCIENCE.**—The Director of the National
 Science Foundation shall contract with the National Acad-
 emy of Sciences to develop, not later than 180 days after
 the date of enactment of this Act, a report that—

(1) identifies the most critical forensic science
 disciplines, which may include forensic pathology
 and digital forensics, that require further research to

1 strengthen the scientific foundation in those dis-
 2 eiplines; and

3 ~~(2)~~ makes recommendations regarding research
 4 that will help strengthen the scientific foundation in
 5 the forensic science disciplines identified under para-
 6 graph ~~(1)~~.

7 ~~(c) NATIONAL FORENSIC SCIENCE COORDINATING~~
 8 ~~OFFICE.—~~

9 ~~(1) ESTABLISHMENT.—~~There is established a
 10 National Forensic Science Coordinating Office, with
 11 a director and full-time staff, to be located at the
 12 National Science Foundation. The Director of the
 13 Coordinating Office shall be responsible for carrying
 14 out the provisions of this subsection.

15 ~~(2) UNIFIED FEDERAL RESEARCH STRATEGY.—~~
 16 The Coordinating Office established under para-
 17 graph ~~(1)~~ shall coordinate among relevant Federal
 18 departments, agencies, or offices—

19 ~~(A)~~ the development of a unified Federal
 20 research strategy that—

21 ~~(i)~~ specifies and prioritizes the re-
 22 search necessary to enhance the validity
 23 and reliability of the forensic science dis-
 24 eiplines; and

1 (ii) is consistent with the rec-
 2 ommendations in the National Academy of
 3 Sciences report on forensic science under
 4 subsection (b);

5 (B) the development of a 5-year roadmap,
 6 updated triennially thereafter, for the unified
 7 Federal research strategy under subparagraph
 8 (A) that includes a description of—

9 (i) which department, agency, or of-
 10 fice will carry out each specific element of
 11 the unified Federal research strategy;

12 (ii) short-term and long-term prior-
 13 ities and objectives; and

14 (iii) common metrics and other eval-
 15 uation criteria that will be used to assess
 16 progress toward achieving the priorities
 17 and objectives under clause (ii); and

18 (C) any necessary programs, policies, and
 19 budgets to support the implementation of the
 20 roadmap under subparagraph (B).

21 (3) ~~ADDITIONAL DUTIES.~~—The Coordinating
 22 Office shall—

23 (A) evaluate annually the national forensic
 24 science research program to determine whether
 25 it is achieving its objectives; and

1 (B) report annually to Congress the find-
2 ings under subparagraph (A).

3 (4) DEADLINES.—The Coordinating Office shall
4 submit to Congress—

5 (A) not later than 1 year after the date of
6 enactment of this Act, the unified Federal re-
7 search strategy under paragraph (2)(A);

8 (B) not later than 1 year after the date of
9 enactment of this Act, the initial 5-year road-
10 map under paragraph (2)(B); and

11 (C) not later than 1 month after the date
12 it is updated, each updated 5-year roadmap
13 under paragraph (2)(B).

14 **SEC. 5. FORENSIC SCIENCE RESEARCH GRANTS PROGRAM.**

15 (a) ESTABLISHMENT.—Not later than 1 year after
16 the date of enactment of this Act, the National Science
17 Foundation shall establish a forensic science research
18 grants program to improve the foundation and practice
19 of forensic science in the United States based on the rec-
20 ommendations in the unified Federal research strategy
21 under section 4.

22 (b) MERIT REVIEW.—Each grant under this section
23 shall be awarded on a merit-reviewed, competitive basis.

24 (c) PUBLICATION.—The National Science Founda-
25 tion shall support, as appropriate, the publication of re-

1 search results under this section in scholarly, peer-re-
 2 viewed scientific journals.

3 ~~(d) FORENSIC SCIENCE RESEARCH CENTERS.—~~

4 ~~(1) IN GENERAL.—~~As part of the forensic
 5 science research grants program under subsection
 6 ~~(a)~~, the Director of the National Science Foundation
 7 shall establish 2 forensic science research centers—

8 ~~(A)~~ to conduct research consistent with the
 9 unified Federal research strategy under section
 10 4;

11 ~~(B)~~ to build relationships between forensic
 12 science practitioners and members of the re-
 13 search community;

14 ~~(C)~~ to encourage and promote the edu-
 15 cation and training of a diverse group of people
 16 to be leaders in the interdisciplinary field of fo-
 17 rensic science; and

18 ~~(D)~~ to broadly disseminate the results of
 19 the research under subparagraph ~~(A)~~.

20 ~~(2) TERMS OF DESIGNATION.—~~

21 ~~(A) IN GENERAL.—~~The Director shall des-
 22 ignate each forensic science research center for
 23 a 4-year term.

24 ~~(B) REVOCATION.—~~The Director may re-
 25 voke a designation under subparagraph ~~(A)~~ if

1 the Director determines that the forensic
2 science research center is not demonstrating
3 adequate performance.

4 (C) AMOUNT OF AWARD.—Subject to sub-
5 section (f), the Director shall award a grant up
6 to \$10,000,000 to each forensic science re-
7 search center. A grant awarded under this sub-
8 paragraph shall be for a period of 4 years.

9 (D) LIMITATION ON USE OF FUNDS.—No
10 funds authorized under this section may be
11 used to construct or renovate a building or
12 structure.

13 (3) REPORTS.—Each forensic science research
14 center shall submit an annual report to the Director,
15 at such time and in such manner as the Director
16 may require, that contains a description of the ac-
17 tivities the center carried out with the funds received
18 under this subsection, including a description of how
19 those activities satisfy the requirement under para-
20 graph (2)(D).

21 (c) EVALUATION.—

22 (1) IN GENERAL.—The Director of the National
23 Science Foundation shall conduct a comprehensive
24 evaluation of the forensic science research grants
25 program every 4 years—

(A) to determine whether the program is achieving the objectives of improving the foundation and practice of forensic science in the United States; and

(B) to evaluate the extent to which the program is contributing toward the priorities and objectives described in the roadmap under section 4(e)(2)(B).

(2) REPORT TO CONGRESS.—The Director of the National Science Foundation shall report to Congress the results of each comprehensive evaluation under paragraph (1).

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the National Science Foundation to carry out this section—

(1) \$37,000,000 for fiscal year 2014;

(2) \$40,000,000 for fiscal year 2015;

(3) \$43,000,000 for fiscal year 2016;

(4) \$46,000,000 for fiscal year 2017; and

(5) \$49,000,000 for fiscal year 2018.

SEC. 6. FORENSIC SCIENCE RESEARCH CHALLENGES.

(a) PRIZES AND CHALLENGES.—

(1) IN GENERAL.—A Federal department, agency, or office may assist in satisfying the research needs and priorities identified in the unified Federal

1 research strategy under section 4 by using prizes
2 and challenges under the America COMPETES Re-
3 authorization Act (124 Stat. 3982) or under any
4 other provision of law, as appropriate.

5 (2) PURPOSES.—The purpose of a prize or
6 challenge under this section, among other possible
7 purposes, may be—

8 (A) to determine or develop the best data
9 collection practices or analytical methods to
10 evaluate a specific type of forensic data; or

11 (B) to determine the accuracy of an ana-
12 lytical method.

13 (b) FORENSIC EVIDENCE PRIZES AND CHAL-
14 LENGES.—

15 (1) IN GENERAL.—A Federal department, agen-
16 cy, or office, or multiple Federal departments, agen-
17 cies, or offices in cooperation, carrying out a prize
18 or challenge under this section—

19 (A) may establish a prize advisory board;
20 and

21 (B) shall select each member of the prize
22 advisory board with input from relevant Federal
23 departments, agencies, or offices.

24 (2) PRIZE ADVISORY BOARD.—The prize advi-
25 sory board shall—

1 (A) identify 1 or more types of forensic
2 evidence for purposes of a prize or challenge;

3 (B) using the samples under paragraph
4 ~~(3)~~, recommend how to structure a prize or
5 challenge that requires a competitor to develop
6 a forensic data collection practice, an analytical
7 method, or a relevant approach or technology to
8 be tested relative to a known outcome or other
9 proposed judging methodology; and

10 (C) through the Coordinating Office, ad-
11 vise relevant Federal departments, agencies, or
12 offices in designing prizes or challenges that
13 satisfy the research needs and priorities identi-
14 fied in the unified Federal research strategy
15 under section 4.

16 ~~(3)~~ SAMPLES.—The National Institute of
17 Standards and Technology or the Department of
18 Justice shall provide or contract with a non-Federal
19 party to prepare, for each type of forensic evidence
20 under paragraph ~~(2)~~(A), a sufficient set of samples,
21 including associated digital data that could be
22 shared without limitation and physical specimens
23 that could be shared with qualified parties, for pur-
24 poses of a prize or challenge.

1 (4) FINGERPRINT DATA INTEROPERABILITY.—

2 At least 1 prize or challenge under this section shall
 3 be focused on achieving nationwide fingerprint data
 4 interoperability if the prize advisory board, the Co-
 5 ordinating Office, or a Federal department, agency,
 6 or office identifies an area where a prize or challenge
 7 will assist in satisfying a strategy related to this
 8 issue.

9 **SEC. 7. FORENSIC SCIENCE STANDARDS.**

10 (a) ESTABLISHMENT.—

11 (1) IN GENERAL.—The National Institute of
 12 Standards and Technology shall—

13 (A) identify or coordinate the development
 14 of forensic science standards to enhance the va-
 15 lidity and reliability of forensic science activi-
 16 ties, including—

17 (i) authoritative methods, standards,
 18 and technical guidance, including protocols
 19 and best practices, for forensic measure-
 20 ments, analysis, and interpretation;

21 (ii) technical standards for products
 22 and services used by forensic science prac-
 23 titioners;

24 (iii) standard content, terminology,
 25 and parameters to be used in reporting

1 and testifying on the results and interpre-
2 tation of forensic science measurements,
3 tests, and procedures; and

4 (iv) standards to provide for the inter-
5 operability of forensic science-related tech-
6 nology and databases;

7 (B) test and validate existing forensics
8 standards, as appropriate; and

9 (C) provide independent validation of fo-
10 rensic science measurements and methods.

11 (2) CONSULTATION.—

12 (A) IN GENERAL.—In carrying out its re-
13 sponsibilities under paragraph (1), the National
14 Institute of Standards and Technology shall
15 consult with—

16 (i) standards development organiza-
17 tions and other stakeholders, including rel-
18 evant Federal departments, agencies, and
19 offices; and

20 (ii) testing laboratories and accredita-
21 tion bodies to ensure that products and
22 services meet necessary performance levels.

23 (3) PRIORITIZATION.—When prioritizing its re-
24 sponsibilities under paragraph (1), the National In-

1 stitute of Standards and Technology shall con-
2 sider—

3 (A) the unified Federal research strategy
4 under section 4; and

5 (B) the recommendations of any expert
6 working group under subsection (b).

7 (4) REPORT TO CONGRESS.—The Director of
8 the National Institute of Standards and Technology
9 shall report annually, with the President’s budget re-
10 quest, to Congress on the progress in carrying out
11 the National Institute of Standards and Tech-
12 nology’s responsibilities under paragraph (1).

13 (b) EXPERT WORKING GROUPS.—

14 (1) IN GENERAL.—The Director of the National
15 Institute of Standards and Technology may establish
16 1 or more discipline-specific expert working groups
17 to identify gaps, areas of need, and opportunities for
18 standards development with respect to forensic
19 science.

20 (2) MEMBERS.—A member of an expert work-
21 ing group shall—

22 (A) be appointed by the Director of the
23 National Institute of Standards and Tech-
24 nology;

1 (B) have significant academic, research, or
 2 practical expertise in a discipline of forensic
 3 science or in another area relevant to the pur-
 4 pose of the expert working group; and

5 (C) balance scientific rigor with practical
 6 and regulatory constraints.

7 ~~(3) FEDERAL ADVISORY COMMITTEE ACT.—An~~
 8 expert working group established under this sub-
 9 section shall not be subject to the Federal Advisory
 10 Committee Act (5 U.S.C. App.).

11 ~~(e) AUTHORIZATION OF APPROPRIATIONS.—There~~
 12 are authorized to be appropriated to the National Institute
 13 of Standards and Technology to carry out this section—

14 ~~(1) \$12,000,000 for fiscal year 2014;~~

15 ~~(2) \$20,000,000 for fiscal year 2015;~~

16 ~~(3) \$27,000,000 for fiscal year 2016;~~

17 ~~(4) \$35,000,000 for fiscal year 2017; and~~

18 ~~(5) \$43,000,000 for fiscal year 2018.~~

19 **SEC. 8. FORENSIC SCIENCE ADVISORY COMMITTEE.**

20 ~~(a) ESTABLISHMENT.—The Director of the National~~
 21 Institute of Standards and Technology and the Attorney
 22 General, in collaboration with the Director of the National
 23 Science Foundation, shall establish a Forensic Science Ad-
 24 visory Committee.

1 (b) DUTIES.—The Advisory Committee shall provide
2 advice to—

3 (1) the Federal departments, agencies, and of-
4 fices implementing the unified Federal research
5 strategy under section 4;

6 (2) the National Institute of Standards and
7 Technology, including recommendations regarding
8 the National Institute of Standards and Tech-
9 nology's responsibilities under section 7; and

10 (3) the Department of Justice, including rec-
11 ommendations regarding the Department of Jus-
12 tice's responsibilities under section 9.

13 (c) SUBCOMMITTEES.—The Advisory Committee may
14 form subcommittees related to specific disciplines in foren-
15 sic science or as necessary to further its duties under sub-
16 section (b). A subcommittee may include an individual who
17 is not a member of the Advisory Committee.

18 (d) CHAIRS.—The Director of the National Institute
19 of Standards and Technology and the Attorney General,
20 or their designees, shall co-chair the Advisory Committee.

21 (e) MEMBERSHIP.—The Director of the National In-
22 stitute of Standards and Technology and the Attorney
23 General, in consultation with the Director of the National
24 Science Foundation, shall appoint each member of the Ad-
25 visory Committee. The Advisory Committee shall include

1 balanced representation between forensic science dis-
 2 ciplines (including academic scientists, statisticians, social
 3 scientists, engineers, and representatives of other related
 4 scientific disciplines) and relevant forensic science applica-
 5 tions (including Federal, State, and local representatives
 6 of the forensic science community, the legal community,
 7 victim advocate organizations, and law enforcement).

8 (f) ADMINISTRATION.—The Attorney General shall
 9 provide administrative support to the Advisory Committee.

10 (g) FEDERAL ADVISORY COMMITTEE ACT.—The Ad-
 11 visory Committee established under this section shall not
 12 be subject to section 14 of the Federal Advisory Com-
 13 mittee Act (5 U.S.C. App.).

14 **SEC. 9. ADOPTION, ACCREDITATION, AND CERTIFICATION.**

15 The Attorney General—

16 (1) shall promote the adoption of forensic
 17 science standards developed under section 7, includ-
 18 ing—

19 (A) by requiring each Federal forensic lab-
 20 oratory to adopt the forensic science standards;

21 (B) by encouraging each non-Federal fo-
 22 rensic laboratory to adopt the forensic science
 23 standards;

1 (C) by promoting accreditation and certifi-
 2 cation requirements based on the forensic
 3 science standards; and

4 (D) by promoting any recommendations
 5 made by the Advisory Committee for adoption
 6 and implementation of forensic science stand-
 7 ards; and

8 (2) may promote the adoption of the forensic
 9 science standards as a condition of Federal funding
 10 or for inclusion in national data sets.

11 **SEC. 10. NATIONAL INSTITUTE OF STANDARDS AND TECH-**
 12 **NOLOGY FUNCTIONS.**

13 Section 2(b) of the National Institute of Standards
 14 and Technology Act (15 U.S.C. 272(b)) is amended—

15 (1) in paragraph (12), by striking “and” after
 16 the semicolon;

17 (2) in paragraph (13), by striking the period at
 18 the end and inserting “; and”; and

19 (3) by adding at the end the following:

20 “(14) to identify and coordinate the develop-
 21 ment of forensic science standards to enhance the
 22 validity and reliability of forensic science activities.”.

23 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

24 (a) *SHORT TITLE.*—*This Act may be cited as the “Fo-*
 25 *rensic Science and Standards Act of 2014”.*

1 *(b) TABLE OF CONTENTS.—The table of contents of this*
 2 *Act is as follows:*

- Sec. 1. Short title; table of contents.*
- Sec. 2. Findings.*
- Sec. 3. Definitions.*
- Sec. 4. National forensic science research initiative.*
- Sec. 5. Implementation of forensic science research recommendations.*
- Sec. 6. Forensic science research challenges.*
- Sec. 7. Forensic science standards.*
- Sec. 8. National Commission on Forensic Science.*
- Sec. 9. Adoption, accreditation, and certification.*
- Sec. 10. National Institute of Standards and Technology functions.*
- Sec. 11. Effect on other laws.*

3 **SEC. 2. FINDINGS.**

4 *Congress finds that—*

5 *(1) at the direction of Congress, the National*
 6 *Academy of Sciences led a comprehensive review of*
 7 *the state of forensic science and issued its findings in*
 8 *a 2009 report, “Strengthening Forensic Science in the*
 9 *United States: A Path Forward”;*

10 *(2) the report states that research is needed to*
 11 *address issues of accuracy, reliability, and validity in*
 12 *the forensic disciplines;*

13 *(3) the report stresses the need for standards in*
 14 *methods, data interpretation, and reporting, and the*
 15 *importance of preventing cognitive bias and miti-*
 16 *gating human factors; and*

17 *(4) according to the report, forensic science re-*
 18 *search is not financially well supported, and there is*
 19 *a need for a unified strategy for developing a forensic*
 20 *science research plan across Federal agencies.*

1 **SEC. 3. DEFINITIONS.**

2 *In this Act:*

3 (1) *APPROPRIATE COMMITTEES OF CONGRESS.*—

4 *The term “appropriate committees of Congress”*
5 *means the Committee on Commerce, Science, and*
6 *Transportation and the Committee on the Judiciary*
7 *of the Senate and the Committee on Science and the*
8 *Committee on the Judiciary of the House of Rep-*
9 *resentatives.*

10 (2) *COMMISSION.*—*The term “Commission”*
11 *means the National Commission on Forensic Science,*
12 *a Federal advisory committee established under sec-*
13 *tion 8.*

14 (3) *COORDINATING OFFICE.*—*The term “Coordi-*
15 *nating Office” means the National Forensic Science*
16 *Coordinating Office established under section 4.*

17 (4) *FORENSIC SCIENCE.*—

18 (A) *IN GENERAL.*—*The term “forensic*
19 *science” means the basic and applied scientific*
20 *research and its application, including all tests,*
21 *methods, techniques, measurements, and proce-*
22 *dures, to the recognition, collection, preservation,*
23 *evaluation, and analysis of evidence for use in*
24 *investigations and legal proceedings.*

25 (B) *APPLIED SCIENTIFIC RESEARCH.*—*In*
26 *subparagraph (A), the term “applied scientific*

research” means a systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met.

(C) *BASIC SCIENTIFIC RESEARCH.*—In subparagraph (A), the term “basic scientific research” means a systematic study directed toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind.

(5) *INTERAGENCY COMMITTEE.*—The term “Interagency Committee” means the interagency forensic science committee established under section 4.

(6) *STANDARDS DEVELOPMENT ORGANIZATION.*—The term “standards development organization” means a domestic or an international organization that plans, develops, establishes, or coordinates voluntary consensus standards using procedures that incorporate openness, a balance of interests, consensus, due process, and an appeals process.

SEC. 4. NATIONAL FORENSIC SCIENCE RESEARCH INITIATIVE.

(a) *ESTABLISHMENT.*—There shall be a National Forensic Science Research Initiative to improve, expand, and

1 *coordinate Federal research in the forensic sciences. Federal*
 2 *participation shall include the National Science Founda-*
 3 *tion, the National Institute of Standards and Technology,*
 4 *the Department of Justice, and other Federal departments,*
 5 *agencies, and offices contributing to research in forensic*
 6 *science.*

7 **(b) NATIONAL FORENSIC SCIENCE COORDINATING OF-**
 8 **FICE.—**

9 **(1) ESTABLISHMENT.—***There is established a*
 10 *National Forensic Science Coordinating Office, with*
 11 *a full-time director and additional staff, as needed, to*
 12 *be located at the Office of Science and Technology*
 13 *Policy.*

14 **(2) DIRECTOR.—***The Director of the Coordi-*
 15 *nating Office shall be a senior Federal agency man-*
 16 *ager with expertise relevant to forensic science de-*
 17 *tailed to the Office of Science and Technology Policy*
 18 *for a period of 3 years. Responsibility for providing*
 19 *a director shall rotate among the Federal depart-*
 20 *ments, agencies, or offices participating in the Na-*
 21 *tional Forensic Science Research Initiative.*

22 **(3) DUTIES OF THE DIRECTOR.—***The Director*
 23 *shall be responsible for carrying out the provisions of*
 24 *this section, including coordinating the development*
 25 *of a unified Federal research strategy under sub-*

1 *section (e), working with the Federal departments,*
2 *agencies, and offices to execute the research strategy,*
3 *coordinating the interagency forensic science com-*
4 *mittee established in subsection (c), and overseeing*
5 *periodic reviews of the initiative.*

6 *(4) FUNDING.—Responsibility to fund the Co-*
7 *ordinating Office shall be shared by the Federal de-*
8 *partments, agencies, and offices participating in the*
9 *National Forensic Science Research Initiative. The*
10 *Federal departments, agencies, and offices partici-*
11 *parting in the National Forensic Science Research Ini-*
12 *tiative may dedicate additional full- or part-time*
13 *staff to the Coordinating Office, as appropriate, to*
14 *sustain ongoing activities, facilitate special studies,*
15 *and provide additional support.*

16 *(c) INTERAGENCY FORENSIC SCIENCE COMMITTEE.—*
17 *There is established an interagency forensic science com-*
18 *mittee. The Interagency Committee shall be co-chaired by*
19 *the Director of the Coordinating Office and a senior Federal*
20 *agency scientist with expertise relevant to forensic science*
21 *from a Federal department, agency, or office participating*
22 *in the National Forensic Science Research Initiative. Com-*
23 *mittee members shall include representatives from the Na-*
24 *tional Science Foundation, the National Institute of Stand-*
25 *ards and Technology, the Department of Justice, the De-*

1 *partment of Homeland Security, the Department of De-*
2 *fense, and other Federal departments, agencies, and offices*
3 *contributing to research in forensic science.*

4 *(d) REPORT ON FORENSIC SCIENCE.—Not later than*
5 *180 days after the date of enactment of this Act—*

6 *(1) the Director of the National Science Founda-*
7 *tion, in consultation with the Director of the Coordi-*
8 *nating Office, shall contract with the National Acad-*
9 *emy of Sciences, or a similar external, independent*
10 *science entity, to develop a report that—*

11 *(A) identifies the most critical forensic*
12 *science disciplines that require further research*
13 *to strengthen the scientific foundation in those*
14 *disciplines;*

15 *(B) makes recommendations regarding re-*
16 *search that will help strengthen the scientific*
17 *foundation in the forensic science disciplines*
18 *identified under subparagraph (A) and mecha-*
19 *nisms to accomplish that research;*

20 *(C) takes into account previous studies and*
21 *reports; and*

22 *(D) takes into account the expertise and*
23 *needs of Federal, State, and local forensic science*
24 *practitioners, law enforcement, the legal commu-*

1 *nity, victim advocate organizations, and organi-*
 2 *zations that defend the wrongfully convicted; and*
 3 *(2) the entity contracted under paragraph (1)*
 4 *shall submit the report under that paragraph to the*
 5 *Director of the National Science Foundation, the Di-*
 6 *rector of the Coordinating Office, the Attorney Gen-*
 7 *eral, and the appropriate committees of Congress.*

8 *(e) UNIFIED FEDERAL RESEARCH STRATEGY.—The*
 9 *Director of the Coordinating Office, in coordination with*
 10 *the Interagency Committee, shall oversee—*

11 *(1) the development of a unified Federal research*
 12 *strategy that—*

13 *(A) specifies and prioritizes the research*
 14 *necessary to enhance the validity and reliability*
 15 *of the forensic science disciplines;*

16 *(B) is consistent with the recommendations*
 17 *in the report on forensic science under subsection*
 18 *(d); and*

19 *(C) takes into account practical applica-*
 20 *tions and implementation of the research;*

21 *(2) the development of a 5-year roadmap, up-*
 22 *dated triennially thereafter, for the implementation of*
 23 *the unified Federal research strategy under para-*
 24 *graph (1) that includes a description of—*

1 (A) which Federal department, agency, or
2 office will carry out each specific element of the
3 unified Federal research strategy;

4 (B) short-term and long-term priorities and
5 objectives; and

6 (C) common metrics and other evaluation
7 criteria that will be used to assess progress to-
8 ward achieving the priorities and objectives
9 under subparagraph (B); and

10 (3) the development of any necessary programs,
11 policies, and budgets to support the implementation
12 of the roadmap under paragraph (2), including mech-
13 anisms for joint-agency review of research proposals,
14 for interagency co-funding of research activities, and
15 for information sharing across agencies.

16 (f) CONSULTATION.—In developing and implementing
17 the unified Federal research strategy and roadmap, the Di-
18 rector of the Coordinating Office shall consult with State
19 and local laboratories, as appropriate, to ensure that the
20 unified Federal research strategy and roadmap take into
21 account practical applications and implementations of the
22 research under subsection (e)(1)(C).

23 (g) EVALUATION.—The Director of the Coordinating
24 Office, in coordination with the Interagency Committee,
25 shall—

1 (1) *evaluate biennially the National Forensic*
 2 *Science Research Initiative to ensure that all activi-*
 3 *ties under this section, including research conducted*
 4 *under external grant activities, and through multi-*
 5 *disciplinary research centers or centers of excellence,*
 6 *meet the goals established by the unified Federal re-*
 7 *search strategy and implementation of the 5-year*
 8 *roadmap; and*

9 (2) *report biennially to the appropriate commit-*
 10 *tees of Congress the findings under paragraph (1).*

11 (h) *DEADLINES.*—*The Director of the Coordinating Of-*
 12 *fice shall submit to the appropriate committees of Con-*
 13 *gress—*

14 (1) *not later than 180 days after the date of re-*
 15 *ceipt of the report on forensic science under subsection*
 16 *(d), the unified Federal research strategy under sub-*
 17 *section (e)(1);*

18 (2) *not later than 180 days after the date of re-*
 19 *ceipt of the report on forensic science under subsection*
 20 *(d), the initial 5-year roadmap under subsection*
 21 *(e)(2); and*

22 (3) *not later than 1 month after the date it is*
 23 *updated, each updated 5-year roadmap under sub-*
 24 *section (e)(2).*

1 **SEC. 5. IMPLEMENTATION OF FORENSIC SCIENCE RE-**
2 **SEARCH RECOMMENDATIONS.**

3 (a) *ESTABLISHMENT.*—Federal departments, agencies,
4 and offices participating in the National Forensic Science
5 Research Initiative, including the National Science Foun-
6 dation, the National Institute of Standards and Technology,
7 and the Department of Justice, in partnership with the Di-
8 rector of the Coordinating Office, shall improve the founda-
9 tion and practice of forensic science in the United States
10 by—

11 (1) *conducting or supporting research consistent*
12 *with the unified Federal research strategy under sec-*
13 *tion 4;*

14 (2) *building relationships between forensic*
15 *science practitioners and members of the research*
16 *community;*

17 (3) *encouraging and promoting the education*
18 *and training of a diverse group of people to be leaders*
19 *in the interdisciplinary field of forensic science; and*

20 (4) *broadly disseminating the results of the re-*
21 *search under paragraph (1).*

22 (b) *EXTERNAL GRANT ACTIVITIES.*—All external fo-
23 rensic science research grants awarded by the Federal de-
24 partments, agencies, or offices under this section shall be
25 consistent with the merit review criteria as approved by
26 the National Science Board and described in the National

1 *Science Foundation Proposal and Award Policies and Pro-*
 2 *cedures Guide, including—*

3 (1) *the ability of each proposed research activity*
 4 *to advance knowledge and understanding relevant to*
 5 *the forensic sciences and to benefit society or advance*
 6 *desired societal outcomes;*

7 (2) *the potential for the research activity to ex-*
 8 *plore creative, original, or transformative concepts;*

9 (3) *the qualifications of the individual, team, or*
 10 *organization proposing the research activity and the*
 11 *adequacy of the research plan; and*

12 (4) *the adequacy of the resources available to the*
 13 *individual, team, or organization proposing the re-*
 14 *search activity.*

15 (c) *PUBLICATION.*—*All research conducted from grants*
 16 *awarded under this section by the Federal departments,*
 17 *agencies, or offices shall take into consideration the require-*
 18 *ments of peer-reviewed scientific journals, and encourage*
 19 *the communication and open exchange of data and results*
 20 *to other agencies, policymakers, and the public.*

21 (d) *GRANT ACTIVITIES.*—*The National Science Foun-*
 22 *ation shall award grants to improve the foundation of fo-*
 23 *rensic science in the United States. Additional mechanisms*
 24 *for implementation may include interagency solicitations,*
 25 *workshops, interagency details and memoranda of under-*

1 *standing, cooperative research centers, pilot programs, and*
 2 *demonstration projects.*

3 *(e) FORENSIC SCIENCE RESEARCH CENTERS.—*

4 *(1) MULTIDISCIPLINARY RESEARCH CENTERS.—*

5 *(A) IN GENERAL.—As part of the National*
 6 *Forensic Science Research Initiative, taking into*
 7 *account the unified Federal research strategy*
 8 *under section 4(e), as informed by the report on*
 9 *forensic science required under section 4(d), the*
 10 *Director of the National Science Foundation, in*
 11 *collaboration with other Federal departments,*
 12 *agencies, and offices contributing to research in*
 13 *forensic science, shall establish 1 or more multi-*
 14 *disciplinary research centers led by public-pri-*
 15 *vate partnerships between universities, industry,*
 16 *State or local entities, and Federal agencies.*
 17 *Each multidisciplinary research center shall be*
 18 *created with the following objectives:*

19 *(i) Conducting basic and translational*
 20 *research relevant for forensic science.*

21 *(ii) Encouraging the application of the*
 22 *research under clause (i) to practical uses.*

23 *(iii) Educating undergraduate and*
 24 *graduate students and developing a work-*
 25 *force in fields relevant to forensic science.*

1 (B) *EVALUATION.*—*The Director of the Na-*
 2 *tional Science Foundation shall conduct a com-*
 3 *prehensive evaluation of the forensic science re-*
 4 *search grants awarded by the National Science*
 5 *Foundation and multidisciplinary research cen-*
 6 *ters every 4 years—*

7 (i) *to determine whether the National*
 8 *Science Foundation is achieving the objec-*
 9 *tives of improving the foundation of forensic*
 10 *science in the United States; and*

11 (ii) *to evaluate the extent to which the*
 12 *National Science Foundation is contrib-*
 13 *uting toward the priorities and objectives*
 14 *described in the roadmap under section*
 15 *4(e).*

16 (C) *REPORTING REQUIREMENT.*—*The Di-*
 17 *rector of the National Science Foundation shall*
 18 *report to the appropriate committees of Congress*
 19 *and the Director of the Coordinating Office the*
 20 *results of each comprehensive evaluation under*
 21 *subparagraph (B).*

22 (2) *CENTER OF EXCELLENCE.*—

23 (A) *IN GENERAL.*—*The Director of the Na-*
 24 *tional Institute of Standards and Technology*
 25 *shall establish and operate a competitively se-*

lected Center of Excellence focusing on measurement sciences, technology, and standards in forensic science with the following objectives:

(i) To improve the standards of practice in the forensic sciences in the United States.

(ii) To produce research collaborations between the National Institute of Standards and Technology, academia, forensic science practitioners, and industry focused on accelerating innovations and new technology development in the forensic sciences.

(iii) To fund the development of new forensics techniques, including automated testing methodologies, and to help transition these techniques to industry and practitioners.

(iv) To fund the evaluation of new and existing forensic techniques in terms of reliability, cost effectiveness, and other metrics, as appropriate, and to help transition these techniques to industry and practitioners.

(v) To provide training opportunities for undergraduate, graduate, and post-doc-

1 *toral students in measurement science, as is*
 2 *relevant to the forensic disciplines.*

3 *(vi) To encourage interdisciplinary re-*
 4 *search in the forensic sciences by leveraging*
 5 *access to unique National Institute of*
 6 *Standards and Technology facilities and ex-*
 7 *pertise, as appropriate.*

8 *(vii) To broadly disseminate the results*
 9 *of the National Institute of Standards and*
 10 *Technology forensic science research.*

11 *(B) EVALUATION.—The Director of the Na-*
 12 *tional Institute of Standards and Technology*
 13 *shall conduct a comprehensive evaluation of the*
 14 *Center of Excellence every 4 years—*

15 *(i) to determine whether the Center of*
 16 *Excellence is achieving the objectives out-*
 17 *lined in subparagraph (A);*

18 *(ii) to evaluate the extent to which the*
 19 *Center of Excellence is contributing toward*
 20 *the priorities and objectives described in the*
 21 *roadmap under section 4(e).*

22 *(C) REPORT REQUIREMENT.—The Director*
 23 *of the National Institute of Standards and Tech-*
 24 *nology shall report to the appropriate committees*
 25 *of Congress and the Director of the Coordinating*

1 *Office the results of each comprehensive evalua-*
 2 *tion under subparagraph (B).*

3 **SEC. 6. FORENSIC SCIENCE RESEARCH CHALLENGES.**

4 *(a) PRIZES AND CHALLENGES.—*

5 *(1) IN GENERAL.—A Federal department, agen-*
 6 *cy, or office may assist in satisfying the research*
 7 *needs and priorities identified in the unified Federal*
 8 *research strategy under section 4 by using prizes and*
 9 *challenges under the America COMPETES Reauthor-*
 10 *ization Act (124 Stat. 3982) or under any other pro-*
 11 *vision of law, as appropriate.*

12 *(2) PURPOSES.—The purpose of a prize or chal-*
 13 *lenge under this section, among other possible pur-*
 14 *poses, may be—*

15 *(A) to determine or develop the best data*
 16 *collection practices or analytical methods to*
 17 *evaluate a specific type of forensic data;*

18 *(B) to quantify or improve the efficiency,*
 19 *reliability, or accuracy of an analytical method;*

20 *(C) to design new methodologies to integrate*
 21 *evidence collection, documentation, and analysis*
 22 *at crime scenes; or*

23 *(D) to address other topics as proposed by*
 24 *the forensic science community.*

1 (b) *FORENSIC DATA SETS.*—*The National Institute of*
 2 *Standards and Technology or the Department of Justice*
 3 *shall provide or contract with a non-Federal party to pre-*
 4 *pare, when necessary, for each prize carried out under this*
 5 *section, a sufficient set of data or samples, including associ-*
 6 *ated digital data that could be shared without limitation*
 7 *and physical specimens that could be shared with qualified*
 8 *parties, for purposes of a prize or challenge.*

9 **SEC. 7. FORENSIC SCIENCE STANDARDS.**

10 (a) *ESTABLISHMENT.*—

11 (1) *IN GENERAL.*—*To enhance the validity and*
 12 *reliability of forensic science activities, the National*
 13 *Institute of Standards and Technology shall—*

14 (A) *identify and coordinate the development*
 15 *of voluntary consensus forensic science stand-*
 16 *ards, including—*

17 (i) *methods, standards, and technical*
 18 *guidance, including protocols and best prac-*
 19 *tices, for analysis and interpretation;*

20 (ii) *technical standards useful in the*
 21 *development of products employed by foren-*
 22 *sic science practitioners;*

23 (iii) *standard content, terminology,*
 24 *and parameters to be used in reporting the*

1 *results and interpretation of forensic science*
 2 *measurements, tests, and procedures; and*

3 *(iv) standards for the interoperability*
 4 *of forensic science-related technology and*
 5 *databases;*

6 *(B) develop forensic science measurement*
 7 *standards, standard reference materials, and*
 8 *other reference materials to support forensic*
 9 *science disciplines and associated measurements;*

10 *(C) test and validate existing forensics*
 11 *science standards, as appropriate; and*

12 *(D) provide independent validation of fo-*
 13 *rensic science measurements and methods.*

14 *(2) CONSULTATION.—*

15 *(A) IN GENERAL.—In carrying out its re-*
 16 *sponsibilities under paragraph (1), the National*
 17 *Institute of Standards and Technology shall con-*
 18 *sult with, and in carrying out its responsibilities*
 19 *under paragraph (1)(A) may partner or contract*
 20 *with—*

21 *(i) standards development organiza-*
 22 *tions and other stakeholders, including the*
 23 *Department of Justice and other relevant*
 24 *Federal departments, agencies, and offices;*
 25 *and*

1 (ii) testing laboratories, State and
 2 local forensic science practitioners, and cer-
 3 tification and accreditation bodies, as ap-
 4 propriate.

5 (3) *PRIORITIZATION*.—When prioritizing its re-
 6 sponsibilities under paragraph (1), the National In-
 7 stitute of Standards and Technology shall consider—

8 (A) the unified Federal research strategy
 9 and roadmap under section 4; and

10 (B) the recommendations of the scientific
 11 area committees under subsection (b).

12 (4) *PUBLIC REVIEW AND COMMENT*.—The Direc-
 13 tor of the National Institute of Standards and Tech-
 14 nology shall ensure that any proposed voluntary con-
 15 sensus standards, guidelines, or methods developed
 16 under this section are publically available, and that
 17 the forensic community has an opportunity for public
 18 review and comment on voluntary consensus stand-
 19 ards.

20 (5) *REPORT TO CONGRESS*.—The Director of the
 21 National Institute of Standards and Technology shall
 22 report biennially to the appropriate committees of
 23 Congress on the progress in carrying out the National
 24 Institute of Standards and Technology’s responsibil-
 25 ities under paragraph (1).

1 **(b) SCIENTIFIC AREA COMMITTEES.—**

2 **(1) IN GENERAL.—***The Director of the National*
3 *Institute of Standards and Technology and the Attor-*
4 *ney General shall establish scientific area committees*
5 *to identify gaps in and opportunities for standards*
6 *development in the forensic sciences. The scientific*
7 *area committees shall report to and be administered*
8 *by the Director of the National Institute of Standards*
9 *and Technology.*

10 **(2) DUTIES.—***The scientific area committees*
11 *shall be the primary mechanism for identifying and*
12 *coordinating the development of voluntary consensus*
13 *forensic science standards as described in subsection*
14 *(a). The scientific area committees shall submit, for*
15 *consideration by forensic science stakeholders and by*
16 *the Commission established in section 8, guidance on*
17 *these forensic science standards. In accomplishing this*
18 *objective, the scientific area committees shall—*

19 **(A)** *encourage information exchange within*
20 *the forensic science community, to include re-*
21 *searchers, practitioners, law enforcement, and*
22 *legal professionals;*

23 **(B)** *ensure that standards development is*
24 *appropriate to the needs of the forensic science*

1 *community and relevant to practical applica-*
 2 *tions;*

3 *(C) take into account existing studies and*
 4 *reports; and*

5 *(D) by holding public meetings and dis-*
 6 *seminating work products, including records, re-*
 7 *ports, minutes, and agendas, for public review*
 8 *and comment to the extent practicable, support*
 9 *public participation in the standards develop-*
 10 *ment process and the broad adoption of forensic*
 11 *science standards.*

12 *(3) MEMBERS.—The scientific area committees*
 13 *shall have significant representation from forensic*
 14 *science practitioners, academic researchers, and stat-*
 15 *isticians to balance scientific rigor with practical and*
 16 *regulatory constraints, and, to the extent practicable,*
 17 *the majority of the scientific area committees shall*
 18 *have a minimum representation of 50 percent from*
 19 *forensic science practitioners. Each member of a sci-*
 20 *entific area committee shall have significant aca-*
 21 *ademic, research, or practical expertise in a discipline*
 22 *of forensic science or in another area relevant to the*
 23 *purpose of the scientific area committee.*

24 *(4) FEDERAL ADVISORY COMMITTEE ACT.—A sci-*
 25 *entific area committee established under this sub-*

1 *section shall not be subject to the Federal Advisory*
 2 *Committee Act (5 U.S.C. App.).*

3 *(c) AUTHORIZATION OF APPROPRIATIONS.—There are*
 4 *authorized to be appropriated out of otherwise available ap-*
 5 *propriations to the National Institute of Standards and*
 6 *Technology to carry out this section—*

7 *(1) \$8,000,000 for fiscal year 2014;*

8 *(2) \$12,000,000 for fiscal year 2015; and*

9 *(3) \$16,000,000 for fiscal year 2016.*

10 **SEC. 8. NATIONAL COMMISSION ON FORENSIC SCIENCE.**

11 *(a) ESTABLISHMENT.—The Director of the National*
 12 *Institute of Standards and Technology and the Attorney*
 13 *General, in consultation with the Director of the National*
 14 *Science Foundation, shall establish a National Commission*
 15 *on Forensic Science.*

16 *(b) DUTIES.—The Commission shall—*

17 *(1) provide advice to the Federal departments,*
 18 *agencies, and offices implementing the unified Federal*
 19 *research strategy under section 4;*

20 *(2) provide advice to the National Institute of*
 21 *Standards and Technology, including recommenda-*
 22 *tions regarding the National Institute of Standards*
 23 *and Technology’s responsibilities under section 7;*

24 *(3) receive and review guidance on standards*
 25 *setting from the scientific area committees established*

1 *under section 7 and, based on this guidance, advise*
 2 *the Department of Justice on the promotion of foren-*
 3 *sic science standards; and*

4 *(4) provide advice to the Department of Justice,*
 5 *including recommendations regarding the develop-*
 6 *ment of a forensic science uniform code of professional*
 7 *responsibility and the Department of Justice's respon-*
 8 *sibilities under section 9.*

9 *(c) SUBCOMMITTEES.—The Commission may form*
 10 *subcommittees related to specific disciplines in forensic*
 11 *science or as necessary to further its duties under subsection*
 12 *(b). A subcommittee may include an individual who is not*
 13 *a member of the Commission.*

14 *(d) CHAIRS.—The Director of the National Institute*
 15 *of Standards and Technology and the Attorney General, or*
 16 *their designees, shall co-chair the Commission.*

17 *(e) MEMBERSHIP.—The Director of the National Insti-*
 18 *tute of Standards and Technology and the Attorney Gen-*
 19 *eral, in consultation with the Director of the National*
 20 *Science Foundation, shall appoint each member of the Com-*
 21 *mission. The Commission shall include balanced representa-*
 22 *tion between forensic science disciplines (including aca-*
 23 *demic scientists, statisticians, social scientists, engineers,*
 24 *and representatives of other related scientific disciplines)*
 25 *and relevant forensic science applications (including Fed-*

1 eral, State, and local representatives of the forensic science
 2 community, the legal community, victim advocate organi-
 3 zations, and law enforcement).

4 (f) *ADMINISTRATION.*—The Attorney General shall
 5 provide administrative support to the Commission.

6 **SEC. 9. ADOPTION, ACCREDITATION, AND CERTIFICATION.**

7 The Attorney General shall promote the adoption of
 8 forensic science standards developed under section 7, includ-
 9 ing—

10 (1) by requiring, as appropriate, each laboratory
 11 under the Department of Justice to adopt the forensic
 12 science standards;

13 (2) by encouraging other Federal forensic labora-
 14 tories to adopt the forensic science standards;

15 (3) by promoting accreditation and certification
 16 requirements based on the forensic science standards;
 17 and

18 (4) by promoting any recommendations made by
 19 the Commission for adoption and implementation of
 20 forensic science standards.

21 **SEC. 10. NATIONAL INSTITUTE OF STANDARDS AND TECH-**
 22 **NOLOGY FUNCTIONS.**

23 Section 2(b) of the National Institute of Standards and
 24 Technology Act (15 U.S.C. 272(b)) is amended—

1 (1) in paragraph (12), by striking “and” after
2 the semicolon;

3 (2) in paragraph (13), by striking the period at
4 the end and inserting “; and”; and

5 (3) by adding at the end the following:

6 “(14) to identify and coordinate the development
7 of voluntary consensus forensic science standards to
8 enhance the validity and reliability of forensic science
9 activities.”.

10 **SEC. 11. EFFECT ON OTHER LAWS.**

11 *Nothing in this Act shall be construed to affect or alter*
12 *the support and technical assistance for State and local lab-*
13 *oratories under part BB of title I of the Omnibus Crime*
14 *Control and Safe Streets Act of 1968 (42 U.S.C. 3797j et*
15 *seq.).*

Calendar No. 619

113TH CONGRESS
2^D Session

S. 2022

A BILL

To establish scientific standards and protocols
across forensic disciplines, and for other purposes.

DECEMBER 8, 2014

Reported with an amendment