

114TH CONGRESS
2D SESSION

H. R. 5795

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

IN THE HOUSE OF REPRESENTATIVES

JULY 14, 2016

Ms. EDDIE BERNICE JOHNSON of Texas (for herself and Mr. VEASEY) introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committee on the Judiciary, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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.**

4 This Act may be cited as the “Forensic Science and
5 Standards Act of 2016”.

6 **SEC. 2. FINDINGS.**

7 Congress finds that—

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

6 (2) the report’s findings indicate the need for
7 independent scientific research to support the foun-
8 dation of forensic disciplines;

9 (3) the report stresses the need for standards
10 in methods, data interpretation, and reporting, and
11 the importance of preventing cognitive bias and miti-
12 gating human factors; and

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

17 **SEC. 3. DEFINITIONS.**

18 In this Act:

19 (1) COMMISSION.—The term “Commission”
20 means the National Commission on Forensic
21 Science, a Federal advisory committee established
22 under section 9.

23 (2) COORDINATING OFFICE.—The term “Co-
24 ordinating Office” means the National Forensic

1 Science Coordinating Office established under sec-
2 tion 4(b).

3 (3) FORENSIC SCIENCE.—The term “forensic
4 science” means the scientific and technical practice
5 applied to the collection, evaluation, and analysis of
6 physical and digital evidence, for use in investiga-
7 tions and legal proceedings, including all tests,
8 methods, measurements, and procedures.

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

16 **SEC. 4. NATIONAL FORENSIC SCIENCE RESEARCH INITIA-**
17 **TIVE.**

18 (a) ESTABLISHMENT.—There is established a Na-
19 tional Forensic Science Research Initiative to improve, ex-
20 pand, and coordinate Federal research in the forensic
21 sciences. Federal participation shall include the National
22 Science Foundation, the National Institute of Standards
23 and Technology, the Department of Justice, and other
24 Federal agencies contributing to research in forensic
25 science.

1 (b) NATIONAL FORENSIC SCIENCE COORDINATING
2 OFFICE.—

3 (1) ESTABLISHMENT.—There is established a
4 National Forensic Science Coordinating Office, with
5 a full-time director and additional staff, as needed,
6 to be located at the Office of Science and Tech-
7 nology Policy.

8 (2) DIRECTOR.—The Director of the Coordi-
9 nating Office shall be a senior Federal agency man-
10 ager with appropriate expertise detailed to the Office
11 of Science and Technology Policy for a period of 3
12 years. Responsibility for providing a director shall
13 rotate among the Federal agencies participating in
14 the National Forensic Science Research Initiative.

15 (3) DUTIES OF THE DIRECTOR.—The Director
16 shall be responsible for carrying out this section, in-
17 cluding coordinating the development of a unified
18 Federal research strategy under subsection (d),
19 working with Federal agencies to execute the re-
20 search strategy, and overseeing periodic reviews of
21 the National Forensic Science Research Initiative.

22 (4) FUNDING.—Responsibility to fund the Co-
23 ordinating Office shall be shared by the Federal
24 agencies participating in the National Forensic
25 Science Research Initiative. Such Federal agencies

1 may dedicate additional full-time or part-time staff
2 to the Coordinating Office, as appropriate, to sus-
3 tain ongoing activities, facilitate special studies, and
4 provide additional support.

5 (c) REPORT ON FORENSIC SCIENCE.—

6 (1) STUDY.—The Director of the National
7 Science Foundation, in consultation with the Direc-
8 tor of the National Institute of Standards and Tech-
9 nology, the Attorney General, and the Director of
10 the Coordinating Office shall contract with the Na-
11 tional Research Council or a similar external, inde-
12 pendent scientific entity to conduct a study and de-
13 velop a report that—

14 (A) assesses progress made in addressing
15 issues identified in the National Research
16 Council’s report entitled “Strengthening Foren-
17 sic Science in the United States: A Path For-
18 ward”, issued in February, 2009;

19 (B) assesses the role of Federal agencies in
20 contributing to such progress;

21 (C) identifies the most critical challenges
22 in forensic science that require further research
23 to—

24 (i) strengthen the scientific foundation
25 of existing forensic science disciplines; and

1 (ii) support the development of emerg-
2 ing forensic science disciplines;

3 (D) makes recommendations regarding re-
4 search that will help address the challenges
5 identified under subparagraph (C), including
6 recommendations to identify mechanisms to ac-
7 complish that research;

8 (E) takes into account previous studies
9 and reports; and

10 (F) takes into account the expertise and
11 needs of Federal, State, local, and tribal foren-
12 sic science practitioners, law enforcement, the
13 legal community, victim advocate organizations,
14 and organizations that defend the wrongfully
15 convicted.

16 (2) SUBMITTAL.—The entity contracted under
17 paragraph (1) shall submit the report under that
18 paragraph to the Director of the National Science
19 Foundation, the Director of the National Institute of
20 Standards and Technology, the Attorney General,
21 and Congress.

22 (d) UNIFIED FEDERAL RESEARCH STRATEGY.—The
23 Coordinating Office shall coordinate with relevant Federal
24 agencies for—

1 (1) the development of a unified Federal re-
2 search strategy that—

3 (A) specifies and prioritizes the short-term
4 and long-term research necessary to enhance
5 the establishment, validity, and reliability of the
6 forensic science disciplines, including specific
7 milestones and objectives as appropriate;

8 (B) describes the role of each Federal
9 agency in supporting the specific areas of re-
10 search identified in subparagraph (A); and

11 (C) describes common metrics and other
12 evaluation criteria that will be used to assess
13 progress toward achieving the priorities, mile-
14 stones, and objectives identified under subpara-
15 graph (A), consistent with the agency’s mission;
16 and

17 (2) the development of any necessary programs,
18 policies, and budgets to support the implementation
19 of the research strategy developed under paragraph
20 (1), including mechanisms for joint-agency review of
21 research proposals, for interagency cofunding of re-
22 search activities, and for information sharing across
23 agencies.

24 (e) CONSULTATION.—In developing and imple-
25 menting the unified Federal research strategy, the Direc-

1 tor of the Coordinating Office shall consult with forensic
2 science practitioners, as appropriate, to ensure that the
3 unified Federal research strategy takes into account prac-
4 tical applications and implementations of the research
5 identified under subsection (d)(1)(A).

6 (f) ANNUAL REPORT.—The Coordinating Office shall
7 submit an annual report to Congress, not later than 90
8 days after the submission of the President’s annual budget
9 request, that includes—

10 (1) the budget for the National Forensic
11 Science Research Initiative for each agency that par-
12 ticipates in the program; and

13 (2) a description of progress made toward
14 achieving the priorities, milestones, and objectives
15 identified in the unified Federal research strategy
16 for the previous fiscal year.

17 **SEC. 5. IMPLEMENTATION OF FORENSIC SCIENCE RE-**
18 **SEARCH RECOMMENDATIONS.**

19 (a) ESTABLISHMENT.—Federal agencies partici-
20 pating in the National Forensic Science Research Initia-
21 tive, including the National Science Foundation, the Na-
22 tional Institute of Standards and Technology, and the De-
23 partment of Justice, in partnership with the Director of
24 the Coordinating Office, shall improve the foundation and
25 practice of forensic science in the United States by—

1 (1) conducting or supporting research con-
2 sistent with the unified Federal research strategy
3 developed under section 4(d);

4 (2) building relationships between forensic
5 science practitioners and members of the research
6 community;

7 (3) encouraging and promoting the education
8 and training of a diverse group of people to be lead-
9 ers in the interdisciplinary field of forensic science;
10 and

11 (4) broadly disseminating the results of the re-
12 search conducted or supported under paragraph (1).

13 (b) MERIT REVIEW.—All external forensic science re-
14 search grants awarded by Federal agencies under this sec-
15 tion shall be subject to a competitive, merit-review process,
16 by individuals qualified to evaluate the scientific merit of
17 the proposed research activity, including review of—

18 (1) the ability of each proposed research activ-
19 ity to advance knowledge and understanding relevant
20 to the forensic sciences and to benefit society or ad-
21 vance desired societal outcomes;

22 (2) the potential for the research activity to ex-
23 plore creative, original, or transformative concepts;

1 (3) the qualifications of the individual, team, or
2 organization proposing the research activity and the
3 adequacy of the research plans; and

4 (4) the adequacy of the resources available to
5 the individual, team, or organization proposing the
6 research activity.

7 (c) PUBLICATION.—All research conducted from
8 grants awarded under this section by Federal agencies
9 shall take into consideration the requirements of peer-re-
10 viewed scientific journals and encourage the communica-
11 tion and open exchange of data and results to other agen-
12 cies, policymakers, and the public.

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

14 (a) PRIZES AND CHALLENGES.—

15 (1) IN GENERAL.—A Federal agency may assist
16 in satisfying the research needs and priorities identi-
17 fied in the unified Federal research strategy devel-
18 oped under section 4(d) by using prizes and chal-
19 lenges under the America COMPETES Reauthoriza-
20 tion Act (Public Law 111–358) or under any other
21 provision of law, as appropriate.

22 (2) PURPOSES.—The purpose of a prize or
23 challenge under this section, among other possible
24 purposes, may be—

1 (A) to determine or develop the best data
2 collection practices or analytical methods to
3 evaluate a specific type of forensic data;

4 (B) to quantify or improve the efficiency,
5 reliability, or accuracy of an analytical method;

6 (C) to design new methodologies to inte-
7 grate evidence collection, documentation, and
8 analysis at crime scenes; or

9 (D) to address other topics as proposed by
10 the forensic science community.

11 (b) FORENSIC DATA SETS.—The National Institute
12 of Standards and Technology or the Department of Jus-
13 tice shall provide or contract with a non-Federal party to
14 prepare, if necessary for a prize carried out under this
15 section, a sufficient set of data or samples, including asso-
16 ciated digital data that could be shared without limitation
17 and physical specimens that could be shared with qualified
18 parties, for purposes of a prize or challenge.

19 **SEC. 7. FORENSIC SCIENCE RESEARCH AT THE NATIONAL**
20 **SCIENCE FOUNDATION.**

21 (a) GRANTS.—The National Science Foundation
22 shall award forensic science basic research grants to im-
23 prove the foundation and practice of forensic science in
24 the United States, consistent with the Foundation's mis-

1 sion and the recommendations in the unified Federal re-
2 search strategy developed under section 4(d).

3 (b) FORENSIC SCIENCE RESEARCH CENTERS.—

4 (1) IN GENERAL.—As part of the National Fo-
5 rensic Science Research Initiative, taking into ac-
6 count the unified Federal research strategy devel-
7 oped under section 4(d), the Director of the Na-
8 tional Science Foundation, in collaboration with
9 other Federal agencies contributing to research in
10 forensic science, shall establish one or more multi-
11 disciplinary research centers led by public-private
12 partnerships between universities, industry, State or
13 local entities, and Federal agencies. Each multidisci-
14 plinary research center shall be created with the fol-
15 lowing objectives:

16 (A) Conducting basic and translational re-
17 search relevant for forensic science.

18 (B) Encouraging the application of the re-
19 search conducted under subparagraph (A) to
20 practical uses.

21 (C) Educating undergraduate and grad-
22 uate students and developing a workforce in
23 fields relevant to forensic science.

24 (c) EVALUATION.—

1 (1) IN GENERAL.—The Director of the National
2 Science Foundation shall conduct a comprehensive
3 evaluation of the Foundation’s full portfolio of foren-
4 sic science research and education grants every 4
5 years—

6 (A) to determine whether the research sup-
7 ported under the grants is contributing to the
8 objectives of improving the foundation and
9 practice of forensic science in the United
10 States; and

11 (B) to evaluate the extent to which the re-
12 search is contributing toward the priorities and
13 objectives described in the unified Federal re-
14 search strategy developed under section 4(d).

15 (2) REPORT TO CONGRESS.—The Director of
16 the National Science Foundation shall report to
17 Congress the results of each comprehensive evalua-
18 tion under paragraph (1).

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

22 (1) \$34,000,000 for fiscal year 2017;

23 (2) \$37,000,000 for fiscal year 2018;

24 (3) \$40,000,000 for fiscal year 2019;

25 (4) \$43,000,000 for fiscal year 2020; and

1 (5) \$46,000,000 for fiscal year 2021.

2 **SEC. 8. FORENSIC SCIENCE AND STANDARDS AT NIST.**

3 (a) IN GENERAL.—The National Institute of Stand-
4 ards and Technology shall—

5 (1) conduct research supporting the develop-
6 ment and dissemination of methods, standards, and
7 technical guidance for forensic science measure-
8 ments;

9 (2) identify and coordinate the development of
10 voluntary consensus forensic science standards, in-
11 cluding—

12 (A) methods, standards, and technical
13 guidance, including protocols and best practices,
14 for analysis and interpretation;

15 (B) technical standards useful in the devel-
16 opment of products employed by forensic
17 science practitioners;

18 (C) standard content, terminology, and pa-
19 rameters to be used in reporting the results and
20 interpretation of forensic science measurements,
21 tests, and procedures; and

22 (D) standards for the interoperability of
23 forensic science-related technology and data-
24 bases; and

1 (3) develop forensic science measurement stand-
2 ards, standard reference materials, standard ref-
3 erence data, and other reference materials to sup-
4 port forensic science disciplines and associated meas-
5 urements.

6 (b) VALIDATION PROGRAM.—In order to ensure the
7 scientific integrity of forensic science standards, the Na-
8 tional Institute of Standards and Technology shall—

9 (1) test and validate existing forensic science
10 standards, as appropriate; and

11 (2) provide independent validation of forensic
12 science measurements and methods, as appropriate.

13 (c) CONSULTATION.—In carrying out its responsibil-
14 ities under subsection (a), the National Institute of Stand-
15 ards and Technology, as appropriate, shall consult with,
16 and in carrying out its responsibilities under subsection
17 (a)(1) may partner or contract with—

18 (1) standards development organizations and
19 other stakeholders, including the Department of
20 Justice and other relevant Federal agencies; and

21 (2) testing laboratories, State and local forensic
22 science practitioners, and certification and accredita-
23 tion bodies.

1 (d) PRIORITIZATION.—When prioritizing its respon-
2 sibilities under subsection (a), the National Institute of
3 Standards and Technology shall consider—

4 (1) the unified Federal research strategy devel-
5 oped under section 4(d); and

6 (2) the recommendations of the scientific area
7 committees established under subsection (g).

8 (e) PUBLIC REVIEW AND COMMENT.—The Director
9 of the National Institute of Standards and Technology
10 shall ensure that any proposed voluntary consensus stand-
11 ards, guidelines, or methods developed by the National In-
12 stitute of Standards and Technology under this section are
13 publically available, and that the forensic community has
14 an opportunity for public review and comment on vol-
15 untary consensus standards.

16 (f) CENTER OF EXCELLENCE.—

17 (1) IN GENERAL.—The Director of the National
18 Institute of Standards and Technology shall estab-
19 lish and operate a competitively selected Center of
20 Excellence focusing on measurement sciences, tech-
21 nology, and standards in forensic science with the
22 following objectives:

23 (A) To improve the standards of practice
24 in the forensic sciences in the United States.

1 (B) To produce research collaborations
2 among the National Institute of Standards and
3 Technology, academia, forensic science practi-
4 tioners, and industry focused on accelerating in-
5 novations and new technology development in
6 the forensic sciences.

7 (C) To fund the development of new
8 forensics techniques, including automated test-
9 ing methodologies, and to help transition these
10 techniques to industry and practitioners.

11 (D) To evaluate new and existing forensic
12 techniques in terms of reliability, cost effective-
13 ness, and other metrics, as appropriate, and to
14 help transition these techniques to industry and
15 practitioners.

16 (E) To provide training opportunities for
17 undergraduate, graduate, and postdoctoral stu-
18 dents in measurement science, as is relevant to
19 the forensic disciplines.

20 (F) To encourage interdisciplinary re-
21 search in the forensic sciences by leveraging ac-
22 cess to unique National Institute of Standards
23 and Technology facilities and expertise, as ap-
24 propriate.

1 (G) To broadly disseminate the results of
2 the National Institute of Standards and Tech-
3 nology forensic science research.

4 (2) EVALUATION.—The Director of the Na-
5 tional Institute of Standards and Technology shall
6 conduct a comprehensive evaluation of the Center of
7 Excellence every 4 years—

8 (A) to determine whether the Center of
9 Excellence is achieving the objectives outlined in
10 paragraph (1); and

11 (B) to evaluate the extent to which the
12 Center of Excellence is contributing toward the
13 priorities and objectives described in the unified
14 Federal research strategy developed under sec-
15 tion 4(d).

16 (3) REPORT REQUIREMENT.—The Director of
17 the National Institute of Standards and Technology
18 shall report to the Committee on Commerce,
19 Science, and Transportation and the Committee on
20 the Judiciary of the Senate, the Committee on
21 Science, Space, and Technology and the Committee
22 on the Judiciary of the House of Representatives,
23 and the Director of the Coordinating Office the re-
24 sults of each comprehensive evaluation under para-
25 graph (2).

1 (g) SCIENTIFIC AREA COMMITTEES.—

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

9 (2) DUTIES.—The scientific area committees
10 shall be the primary mechanism for identifying and
11 coordinating the development of voluntary consensus
12 forensic science standards as described in subsection
13 (a). The scientific area committees shall submit, for
14 consideration by forensic science stakeholders and by
15 the Commission established in section 9, rec-
16 ommendations on these forensic science standards.
17 In accomplishing this objective, the scientific area
18 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;

5 (D) by holding public meetings and dis-
6 seminating work products for public review and
7 comment to the extent practicable, support pub-
8 lic participation in the standards development
9 process and the broad adoption of forensic
10 science standards; and

11 (E) ensure that proposed standards have
12 been validated by the National Institute of
13 Standards and Technology under section 8(b)
14 prior to publication in the Federal Register.

15 (3) MEMBERS.—The scientific area committees
16 shall have significant representation from forensic
17 science practitioners, academic researchers, and stat-
18 isticians to balance scientific rigor with practical and
19 regulatory constraints, and, to the extent prac-
20 ticable, the majority of the scientific area commit-
21 tees shall have a minimum representation of 50 per-
22 cent from forensic science practitioners. Each mem-
23 ber of a scientific area committee shall have signifi-
24 cant academic, research, or practical expertise in a
25 discipline of forensic science or in another area rel-

1 evant to the purpose of the scientific area com-
2 mittee.

3 (4) FEDERAL ADVISORY COMMITTEE ACT.—A
4 scientific area committee established under this sub-
5 section shall not be subject to the Federal Advisory
6 Committee Act (5 U.S.C. App.).

7 (h) AUTHORIZATION OF APPROPRIATIONS.—There
8 are authorized to be appropriated out of otherwise avail-
9 able appropriations to the National Institute of Standards
10 and Technology to carry out this section—

11 (1) \$10,000,000 for fiscal year 2017;

12 (2) \$15,000,000 for fiscal year 2018;

13 (3) \$20,000,000 for fiscal year 2019;

14 (4) \$27,000,000 for fiscal year 2020; and

15 (5) \$35,000,000 for fiscal year 2021.

16 **SEC. 9. NATIONAL COMMISSION ON FORENSIC SCIENCE.**

17 (a) ESTABLISHMENT.—The Director of the National
18 Institute of Standards and Technology and the Attorney
19 General, in consultation with the Director of the National
20 Science Foundation, shall establish a National Commis-
21 sion on Forensic Science.

22 (b) DUTIES.—The Commission shall—

23 (1) provide advice to the Federal agencies im-
24 plementing the unified Federal research strategy de-
25 veloped under section 4(d);

1 (2) provide advice to the National Institute of
2 Standards and Technology, including recommenda-
3 tions regarding the National Institute of Standards
4 and Technology’s responsibilities under section 8;

5 (3) receive and review recommendations on
6 standards development from the scientific area com-
7 mittees established under section 8(g) and, based on
8 its review, advise the Department of Justice on the
9 promotion of forensic science standards; and

10 (4) provide advice to the Department of Jus-
11 tice, including recommendations regarding the devel-
12 opment of a forensic science uniform code of profes-
13 sional responsibility and the Department of Justice’s
14 responsibilities under section 10.

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

20 (d) CHAIRS.—The Director of the National Institute
21 of Standards and Technology and the Attorney General,
22 or their designees, shall co-chair the Commission.

23 (e) MEMBERSHIP.—The Director of the National In-
24 stitute of Standards and Technology and the Attorney
25 General, in consultation with the Director of the National

1 Science Foundation, shall appoint each member of the
2 Commission. The Commission shall include balanced rep-
3 resentation among—

4 (1) independent scientists with expertise in fo-
5 rensic science disciplines and other related dis-
6 ciplines, including statistics, social sciences, and en-
7 gineering;

8 (2) forensic science practitioners, including fo-
9 rensic science experts at Federal, State, local, and
10 tribal forensic laboratories; and

11 (3) users and parties subject to the use of fo-
12 rensic evidence in the legal system, including the
13 legal community, victim advocate organizations, and
14 law enforcement.

15 (f) ADMINISTRATION.—The Attorney General shall
16 provide administrative support to the Commission.

17 **SEC. 10. ADOPTION, ACCREDITATION, AND CERTIFICATION.**

18 The Attorney General shall promote the adoption of
19 forensic science standards developed under section 8, in-
20 cluding—

21 (1) by requiring, as appropriate, each labora-
22 tory under the Department of Justice to adopt the
23 forensic science standards;

24 (2) by encouraging other Federal forensic lab-
25 oratories to adopt the forensic science standards;

1 (3) by promoting accreditation and certification
2 requirements based on the forensic science stand-
3 ards; and

4 (4) by promoting any recommendations made
5 by the Commission for adoption and implementation
6 of forensic science standards.

○