

**Calendar No. 286**118TH CONGRESS  
1ST SESSION**S. 1280**

To require coordinated National Institute of Standards and Technology science and research activities regarding illicit drugs containing xylazine, novel synthetic opioids, and other substances of concern, and for other purposes.

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**IN THE SENATE OF THE UNITED STATES**

APRIL 25, 2023

Mr. CRUZ (for himself, Mr. WELCH, Mrs. CAPITO, Mr. WARNOCK, Mrs. BLACKBURN, and Ms. CANTWELL) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

DECEMBER 13, 2023

Reported by Ms. CANTWELL, with an amendment

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

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**A BILL**

To require coordinated National Institute of Standards and Technology science and research activities regarding illicit drugs containing xylazine, novel synthetic opioids, and other substances of concern, 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,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Testing, Rapid Anal-  
3 ysis, and Narcotic Quality Research Act of 2023” or the  
4 “TRANQ Research Act of 2023”.

5 **SEC. 2. XYLAZINE DETECTION AND ANALYSIS.**

6 (a) DEFINITIONS.—In this section:

7 (1) DIRECTOR.—The term “Director” means  
8 the Director of the National Institute of Standards  
9 and Technology.

10 (2) FEDERAL LABORATORY.—The term “Fed-  
11 eral laboratory” has the meaning given such term in  
12 section 4 of the Stevenson-Wydler Technology Inno-  
13 vation Act of 1980 (15 U.S.C. 3703).

14 (3) INSTITUTE.—The term “Institute” means  
15 the National Institute of Standards and Technology.

16 (4) INSTITUTION OF HIGHER EDUCATION.—The  
17 term “institution of higher education” has the  
18 meaning given such term in section 101 of the High-  
19 er Education Act of 1965 (19 U.S.C. 1001).

20 (5) NONPROFIT ORGANIZATION.—The term  
21 “nonprofit organization” means an organization de-  
22 scribed in section 501(e)(3) of the Internal Revenue  
23 Code of 1986 and exempt from tax under section  
24 501(a) of such code.

25 (6) XYLAZINE.—The term “xylazine” means  
26 the nonopioid tranquilizer methyl benzene compound

1 frequently used in veterinary medicine as an emetic  
2 and sedative with analgesic and muscle relaxant  
3 properties.

4 (b) IN GENERAL.—The Director shall—

5 (1) support intramural basic measurement  
6 science and research of the Institute to advance—

7 (A) analytical methods to identify, under-  
8 stand, differentiate, and categorize illicit drugs  
9 containing xylazine, novel synthetic opioids, or  
10 other emerging substances of concern;

11 (B) measurement technologies to shorten  
12 analysis timelines and enhance narcotic and  
13 opioid detection and analysis capabilities in il-  
14 licit drugs;

15 (C) new data tools, techniques, and pro-  
16 cesses to identify and publicly disclose relevant  
17 information concerning illicit drugs containing  
18 xylazine, novel synthetic opioids, or other  
19 emerging substances of concern; and

20 (D) all other areas determined by the Di-  
21 rector to be critical to the development and de-  
22 ployment of technologies to measure and ana-  
23 lyze the presence of xylazine, novel synthetic  
24 opioids, and other emerging substances of con-  
25 cern in illicit drugs;

1           (2) support activities to inform and expand the  
2           development of near-real time spectrometry capabilities  
3           regarding xylazine, novel synthetic opioids, and  
4           other emerging compounds in illicit drugs;

5           (3) convene the private sector, institutions of  
6           higher education, nonprofit organizations, Federal  
7           laboratories, and other Federal agencies engaged in  
8           the analysis of illicit drugs to develop coordinated  
9           strategies and voluntary best practices for the safe  
10          handling, transport, and analysis of illicit drugs con-  
11          taining xylazine, novel synthetic opioids, or other  
12          emerging substances of concern;

13          (4) establish or expand collaborative partner-  
14          ships or consortia with other government agencies  
15          engaged in counternarcotic research and develop-  
16          ment, institutions of higher education, Federal lab-  
17          oratories, and the private sector to enhance narcotic  
18          and opioid detection and analysis capabilities regard-  
19          ing xylazine, novel synthetic opioids, and other  
20          emerging substances of concern in illicit drugs; and

21          (5) provide opportunities for graduate and post-  
22          graduate research on the detection and identification  
23          of xylazine, novel synthetic opioids, and other emerg-  
24          ing substances of concern in illicit drugs.

1       (e) **CONTROLS.**—In carrying out activities under this  
2 section, the Director shall ensure proper security controls  
3 are implemented to protect sensitive information, as ap-  
4 propriate.

5       (d) **REPORT.**—Not later than 1 year after the date  
6 of the enactment of this Act, the Director shall submit  
7 to the Committee on Commerce, Science, and Transpor-  
8 tation of the Senate and the Committee on Science, Space,  
9 and Technology of the House of Representatives a report  
10 on the implementation of this section. Such report may  
11 include recommendations for legislative action to improve  
12 the ability of the Director to carry out this section.

13 **SECTION 1. SHORT TITLE.**

14       *This Act may be cited as the “Testing, Rapid Analysis,*  
15 *and Narcotic Quality Research Act of 2023” or the*  
16 *“TRANQ Research Act of 2023”.*

17 **SEC. 2. XYLAZINE DETECTION AND ANALYSIS.**

18       (a) **DEFINITIONS.**—*In this section:*

19               (1) **DIRECTOR.**—*The term “Director” means the*  
20 *Director of the National Institute of Standards and*  
21 *Technology.*

22               (2) **FEDERAL LABORATORY.**—*The term “Federal*  
23 *laboratory” has the meaning given such term in sec-*  
24 *tion 4 of the Stevenson-Wydler Technology Innovation*  
25 *Act of 1980 (15 U.S.C. 3703).*

1           (3) *INSTITUTE.*—*The term “Institute” means the*  
2           *National Institute of Standards and Technology.*

3           (4) *INSTITUTION OF HIGHER EDUCATION.*—*The*  
4           *term “institution of higher education” has the mean-*  
5           *ing given such term in section 101 of the Higher Edu-*  
6           *cation Act of 1965 (19 U.S.C. 1001).*

7           (5) *NONPROFIT ORGANIZATION.*—*The term “non-*  
8           *profit organization” means an organization described*  
9           *in section 501(c)(3) of the Internal Revenue Code of*  
10          *1986 and exempt from tax under section 501(a) of*  
11          *such code.*

12          (6) *XYLAZINE.*—*The term “xylazine” means the*  
13          *nonopioid tranquilizer methyl benzene compound fre-*  
14          *quently used in veterinary medicine as an emetic and*  
15          *sedative with analgesic and muscle relaxant prop-*  
16          *erties.*

17          (b) *IN GENERAL.*—*The Director shall—*

18                 (1) *support intramural basic measurement*  
19                 *science and research of the Institute to advance—*

20                         (A) *analytical methods to identify, under-*  
21                         *stand, differentiate, and categorize substances*  
22                         *containing xylazine, novel synthetic opioids, or*  
23                         *other new psychoactive substances;*

1           (B) measurement technologies to shorten  
2 analysis timelines and enhance narcotic and  
3 opioid detection and analysis capabilities;

4           (C) new data tools, techniques, and proc-  
5 esses to identify and publicly disclose relevant  
6 information concerning substances containing  
7 xylazine, novel synthetic opioids, or other new  
8 psychoactive substances; and

9           (D) such other areas as the Director deter-  
10 mines to be critical to the development and de-  
11 ployment of technologies to measure and analyze  
12 the presence of xylazine, novel synthetic opioids,  
13 and other new psychoactive substances;

14       (2) support activities to inform and expand the  
15 development of near-real time spectrometry capabili-  
16 ties regarding xylazine, novel synthetic opioids, and  
17 other new psychoactive substances;

18       (3) convene and consult with organizations en-  
19 gaged in the analysis of new psychoactive substances  
20 to develop coordinated strategies and voluntary best  
21 practices for the safe handling, transport, data-shar-  
22 ing, and analysis of substances containing xylazine,  
23 novel synthetic opioids, or other new psychoactive  
24 substances, including—

25           (A) the Drug Enforcement Administration;

1                   (B) *the Centers for Disease Control and*  
2                   *Prevention;*

3                   (C) *the National Institute on Drug Abuse;*

4                   (D) *Federal laboratories;*

5                   (E) *States and territories;*

6                   (F) *State fusion centers;*

7                   (G) *the private sector;*

8                   (H) *intergovernmental organizations;*

9                   (I) *institutions of higher education, and*

10                  (J) *nonprofit organizations;*

11                  (4) *establish or expand collaborative partner-*  
12                  *ships or consortia with other government agencies and*  
13                  *persons engaged in related research and development,*  
14                  *such as institutions of higher education, Federal lab-*  
15                  *oratories, public health agencies, intergovernmental*  
16                  *organizations, and the private sector, to enhance nar-*  
17                  *cotic and opioid detection and analysis capabilities*  
18                  *regarding xylazine, novel synthetic opioids, and other*  
19                  *new psychoactive substances; and*

20                  (5) *encourage graduate and post-graduate re-*  
21                  *search to include detection and identification of*  
22                  *xylazine and other emerging substances of concern in*  
23                  *relevant course studies when practicable.*

24                  (c) *CONTROLS.*—*In carrying out activities under this*  
25                  *section, the Director shall ensure proper security controls*



1 *are implemented to protect sensitive information, as the Di-*  
2 *rector considers appropriate and consistent with applicable*  
3 *provisions of law.*

4 *(d) REPORT.—Not later than 1 year after the date of*  
5 *the enactment of this Act, the Director shall submit to the*  
6 *Committee on Commerce, Science, and Transportation of*  
7 *the Senate and the Committee on Science, Space, and Tech-*  
8 *nology of the House of Representatives a report on the im-*  
9 *plementation of this section. Such report may include rec-*  
10 *ommendations for legislative action to improve the ability*  
11 *of the Director to carry out this section.*

12 **SEC. 3. STUDY ON UNITED STATES GOVERNMENT TECH-**  
13 **NOLOGIES AND ANALYTICAL METHODS TO**  
14 **DETECT AND IDENTIFY NEW PSYCHOACTIVE**  
15 **SUBSTANCES.**

16 *(a) STUDY.—*

17 *(1) IN GENERAL.—The Comptroller General of*  
18 *the United States shall conduct a study of the capa-*  
19 *bilities of the Federal Government to respond to the*  
20 *threats of new psychoactive substances such as*  
21 *xylazine.*

22 *(2) MATTERS EVALUATED.—The study conducted*  
23 *pursuant to paragraph (1) shall include an evalua-*  
24 *tion of the following:*

1           (A) *The capabilities, including technologies*  
2           *and analytical methods, of Federal, State, and*  
3           *local agencies to detect and identify new*  
4           *psychoactive substances such as xylazine.*

5           (B) *An analysis of timeframes for identi-*  
6           *fication and development of technologies and*  
7           *methods to identify new psychoactive substances*  
8           *by Federal, State, and local agencies.*

9           (C) *Facilities, including laboratories, used*  
10          *by Federal, State, and local agencies for the*  
11          *identification of new psychoactive substances*  
12          *such as xylazine.*

13          (D) *Federal grant programs to fund new*  
14          *technology development to detect and identify*  
15          *new psychoactive substances.*

16          (b) *REPORT.—Not later than 2 years after the date*  
17          *of the enactment of this Act, the Comptroller General shall*  
18          *submit to the Committee on Commerce, Science, and Trans-*  
19          *portation of the Senate and the Committee on Transpor-*  
20          *tation and the House Committee on Science a report con-*  
21          *taining the findings of the Comptroller General with respect*  
22          *to the study conducted pursuant to subsection (a).*



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118<sup>TH</sup> CONGRESS  
1<sup>ST</sup> Session

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