

118TH CONGRESS  
1ST SESSION

# S. 1685

To direct the Administrator of the Environmental Protection Agency to establish a consortium relating to exposures to toxic substances and identifying chemicals that are safe to use.

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IN THE SENATE OF THE UNITED STATES

MAY 18, 2023

Mr. PADILLA introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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## A BILL

To direct the Administrator of the Environmental Protection Agency to establish a consortium relating to exposures to toxic substances and identifying chemicals that are safe to use.

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 “Supercomputing for  
5 Safer Chemicals Act” or the “SUPERSAFE Act”.

6 **SEC. 2. SUPERCOMPUTING FOR SAFER CHEMICALS**  
7 **(SUPERSAFE) CONSORTIUM.**

8 (a) ESTABLISHMENT.—

1           (1) IN GENERAL.—The Administrator of the  
2           Environmental Protection Agency (referred to in  
3           this section as the “Administrator”), in consultation  
4           with the heads of relevant Federal agencies (includ-  
5           ing the Secretary of Health and Human Services  
6           and the Secretary of Energy), shall form a consor-  
7           tium, to be known as the “Supercomputing for Safer  
8           Chemicals (SUPERSAFE) Consortium” (referred to  
9           in this section as the “Consortium”). The Consor-  
10          tium shall include the National Laboratories of the  
11          Department of Energy, academic and other research  
12          institutions, and other entities, as determined by the  
13          Administrator, to carry out the activities described  
14          in subsection (b).

15           (2) INCLUSION OF STATE AGENCIES.—The Ad-  
16          ministrator shall allow the head of a relevant State  
17          agency to join the Consortium on request of the  
18          State agency.

19          (b) CONSORTIUM ACTIVITIES.—

20           (1) IN GENERAL.—The Consortium shall use  
21          supercomputing, machine learning, and other similar  
22          capabilities—

23                   (A) to establish rapid approaches for large-  
24                   scale identification of toxic substances and the  
25                   development of safer alternatives to toxic sub-

1 stances by developing and validating computa-  
2 tional toxicology methods based on unique high-  
3 performance computing, artificial intelligence,  
4 machine learning, and precision measurements;

5 (B) to address the need to identify safe  
6 chemicals for use in consumer and industrial  
7 products and in their manufacture to support  
8 the move away from toxic substances and to-  
9 ward safe-by-design alternatives; and

10 (C) to make recommendations on how the  
11 information produced can be applied in risk as-  
12 sessments and other characterizations for use  
13 by the Environmental Protection Agency and  
14 other agencies in regulatory decisions, and by  
15 industry in identifying toxic and safer chemi-  
16 cals.

17 (2) MODELS.—In carrying out paragraph (1),  
18 the Consortium—

19 (A) shall use supercomputers and other  
20 virtual tools to develop, validate, and run mod-  
21 els to predict adverse health effects caused by  
22 toxic substances and to identify safe chemicals  
23 for use in products and manufacturing; and

24 (B) may utilize, as needed, appropriate bi-  
25 ological test systems to test and evaluate ap-

1           proaches and improve their predictability and  
2           reliability in industrial and regulatory applica-  
3           tions.

4           (c) PUBLIC RESULTS.—The Consortium shall make  
5 model predictions, along with supporting documentation,  
6 available to the public in an accessible format.

7           (d) AUTHORIZATION OF APPROPRIATIONS.—There is  
8 authorized to be appropriated to the Administrator to  
9 carry out this section—

- 10           (1) for fiscal year 2023, \$20,000,000;  
11           (2) for fiscal year 2024, \$30,000,000; and  
12           (3) for each of fiscal years 2025 through 2027,  
13           \$35,000,000.

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