

112TH CONGRESS  
2D SESSION

# S. 2369

To establish the American Innovation Bank, to improve science and technology job training, to authorize grants for curriculum development, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

APRIL 25, 2012

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

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## A BILL

To establish the American Innovation Bank, to improve science and technology job training, to authorize grants for curriculum development, 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 “America Innovates Act  
5 of 2012”.

1                   **TITLE I—AMERICAN**  
2                   **INNOVATION BANK**

3 **SEC. 101. ESTABLISHMENT OF THE AMERICAN INNOVATION**  
4                   **BANK.**

5           (a) ESTABLISHMENT.—There is established in the  
6 Executive Branch of the Government an independent  
7 agency to be known as the American Innovation Bank (re-  
8 ferred to in this title as the “Bank”).

9           (b) BOARD AND DIRECTOR.—

10           (1) IN GENERAL.—The Bank shall consist of an  
11 American Innovation Board (referred to in this title  
12 as the “Board”) and a Director of the American In-  
13 novation Bank (referred to in this title as the “Di-  
14 rector”).

15           (2) APPOINTMENT.—The Director and mem-  
16 bers of the Board shall be appointed by the Presi-  
17 dent, by and with the advice and consent of the Sen-  
18 ate.

19           (3) DUTIES OF THE BOARD.—The Board  
20 shall—

21           (A) advise the Director on new and emerg-  
22 ing areas of research and industry that would  
23 benefit from investment from the Bank; and

24           (B) critically evaluate the success of the  
25 Bank’s investments in helping to commercialize

1 scientific discoveries and create new companies  
2 and jobs.

3 **SEC. 102. FUNCTIONS OF THE BANK.**

4 (a) IN GENERAL.—The Bank is authorized and di-  
5 rected to promote the commercialization of science and en-  
6 gineering discoveries.

7 (b) PROVISION OF GRANTS, LOANS, AND OTHER AS-  
8 SISTANCE.—The Bank shall provide grants, loans, and  
9 other assistance to eligible entities and individuals to en-  
10 able the entities and individuals to perform the necessary  
11 research and development to make research discoveries at-  
12 tractive for private investment that will lead to the devel-  
13 opment of new companies, products, and jobs.

14 **SEC. 103. ANNUAL REPORTS.**

15 (a) IN GENERAL.—The Board, in consultation with  
16 the Director, shall submit an annual report to Congress  
17 on or before the 15th day of April of each year summa-  
18 rizing the activities of the Bank and making such rec-  
19 ommendations as the Board, in consultation with the Di-  
20 rector, determines appropriate.

21 (b) SPECIFIC METRICS.—Each annual report sub-  
22 mitted under subsection (a) shall include specific metrics  
23 that quantify the success of the Bank’s investments, in-  
24 cluding information about—

1           (1) patents for discoveries and products sup-  
2           ported by the Bank;

3           (2) products commercialized with the help of  
4           Bank investments;

5           (3) new companies started because of Bank in-  
6           vestments; and

7           (4) jobs that have resulted because of Bank in-  
8           vestments.

9   **SEC. 104. GRANTS TO INSTITUTIONS OF HIGHER EDU-**  
10                                   **CATION AND RESEARCH INSTITUTES.**

11           (a) **IN GENERAL.**—The Bank, acting through the Di-  
12           rector, shall award grants to eligible entities to carry out  
13           activities described in this section.

14           (b) **ELIGIBLE ENTITIES.**—In this title, the term “eli-  
15           gible entity” means—

16           (1) an institution of higher education (as de-  
17           fined in section 101 of the Higher Education Act of  
18           1965 (20 U.S.C. 1001)); or

19           (2) a nonprofit research institution that focuses  
20           on science research.

21           (c) **ADVISORY PANEL.**—Before awarding grants  
22           under this section, the Director shall convene an advisory  
23           panel of experts on technology transfer, including business  
24           leaders and scientific researchers, who shall make rec-  
25           ommendations to the Director about those eligible entities,

1 that apply for funding under this section, most likely to  
2 be able to use grant funds awarded under this title to fos-  
3 ter the development of new companies, products, and jobs.

4 (d) AWARDING OF GRANTS.—The Director shall  
5 award grants, on a competitive basis, to eligible entities  
6 to enable the eligible entities to develop new companies,  
7 products, or jobs and technologies in a specific research  
8 area, including the following:

9 (1) Life sciences and medicine.

10 (2) Computer sciences, communications, and  
11 technology.

12 (3) Physical sciences and engineering.

13 (4) Other research areas determined important  
14 for economic development by the Director.

15 (e) PRIORITY.—In awarding grants under this sec-  
16 tion, the Director shall give priority to entities that—

17 (1) receive a significant amount of Federal  
18 funding to conduct science research from the Na-  
19 tional Science Foundation, the Department of En-  
20 ergy, the National Institutes of Health, or other  
21 agencies that the Director determines appropriate;

22 (2) do not have a significant proof of concept  
23 fund already established at the entity;

24 (3) have established relationships with business  
25 and industry that are likely to be able to use and

1 commercialize science and engineering discoveries  
2 and may be in close proximity to such industry and  
3 businesses;

4 (4) demonstrate an institutional environment  
5 that is supportive of business development, includ-  
6 ing—

7 (A) an institutional strategic plan for busi-  
8 ness development; and

9 (B) a plan to leverage Federal investments  
10 with State, local, private, or other investments;  
11 and

12 (5) demonstrate the appropriate administrative  
13 capacity to encourage the disclosure, patenting, and  
14 development of new companies, products, or jobs.

15 (f) USE OF FUNDS.—

16 (1) IN GENERAL.—An eligible entity that re-  
17 ceives a grant under this section may use the grant  
18 funds for the following:

19 (A) Supporting researchers that seek to  
20 develop science and engineering discoveries into  
21 new companies, products, or jobs, including ad-  
22 ditional research or data collection with the goal  
23 of making a particular discovery attractive to  
24 investment from private entities such as cor-  
25 porations and venture capital firms.

1 (B) Awarding subgrants to individual in-  
2 vestigators to carry out the activities described  
3 in subparagraph (A).

4 (C) Constructing facilities and creating  
5 business incubators to carry out the activities  
6 described in subparagraph (A).

7 (D) Attracting additional private invest-  
8 ment to grow and maintain the eligible entity's  
9 proof of concept funding.

10 (2) SUBGRANTS.—

11 (A) IN GENERAL.—In awarding subgrants  
12 to individual investigators as described in para-  
13 graph (1)(B), an eligible entity shall consult  
14 with business leaders in relevant economic sec-  
15 tors to identify technologies that are most  
16 promising and likely to attract private invest-  
17 ment with research and development funded by  
18 the proof of concept funding.

19 (B) ADVISORY COMMITTEE.—

20 (i) IN GENERAL.—An eligible entity  
21 shall convene an advisory committee of re-  
22 searchers and business leaders in the ap-  
23 propriate sector to review and recommend  
24 applications for subgrants under this sub-  
25 section.

1                   (ii) CONSIDERATION OF REC-  
 2                   COMMENDATIONS.—An eligible entity shall  
 3                   take into consideration the recommenda-  
 4                   tions of the advisory committee convened  
 5                   under clause (i) when making decisions  
 6                   about subgrants under this subsection.

7                   (iii) WRITTEN JUSTIFICATION.—If an  
 8                   eligible entity’s grant making decision is  
 9                   different from the recommendations of the  
 10                  advisory committee under this subpara-  
 11                  graph, the entity shall submit written jus-  
 12                  tification for the decision to the Director.

13                  (3) CONSTRUCTING FACILITIES.—

14                  (A) IN GENERAL.—In using funds to con-  
 15                  struct facilities pursuant to paragraph (1)(C),  
 16                  an eligible entity shall consult with business  
 17                  leaders in relevant economic sectors to identify  
 18                  facilities that would most help the eligible entity  
 19                  meet the goals under paragraph (1)(A).

20                  (B) ADVISORY COMMITTEE.—

21                  (i) IN GENERAL.—An eligible entity  
 22                  shall convene an advisory committee of re-  
 23                  searchers and business leaders in the ap-  
 24                  propriate sector to make recommendations  
 25                  about facilities construction.



1 (ii) CONSIDERATION OF REC-  
2 OMMENDATIONS.—An eligible entity shall  
3 take into consideration the recommenda-  
4 tions of the advisory committee convened  
5 under clause (i) when making decisions  
6 about facilities construction.

7 (iii) WRITTEN JUSTIFICATION.—If an  
8 eligible entity's decision is different from  
9 the recommendations of the advisory com-  
10 mittee under this subparagraph, the entity  
11 shall submit written justification for the  
12 decision to the Director.

13 (g) REPORTS.—

14 (1) IN GENERAL.—Each eligible entity that re-  
15 ceives a grant under this section shall submit a re-  
16 port to the Director each year during the grant pe-  
17 riod and for 5 years after the grant period has  
18 ended.

19 (2) CONTENT OF REPORTS.—The reports sub-  
20 mitted under paragraph (1) shall—

21 (A) detail the subgrants and facilities con-  
22 struction decisions the entity has made since  
23 submitting its last report to the Director;

1 (B) update the Director on the status and  
2 results of subgrants and facilities construction  
3 made from grant funding;

4 (C) report on the companies, products,  
5 jobs, venture capital, and other investments and  
6 funding that have resulted from funding pro-  
7 vided by the grant awarded under this section;

8 (D) report on the degree to which Federal  
9 investments have been leveraged, including ap-  
10 propriate measures of returns on Federal in-  
11 vestments; and

12 (E) provide other information that the Di-  
13 rector determines necessary to evaluate the effi-  
14 cacy of the grant.

15 **SEC. 105. GRANTS TO INDIVIDUALS.**

16 (a) IN GENERAL.—The Bank, acting through the Di-  
17 rector, shall award grants to individual investigators at eli-  
18 gible entities, as defined in section 104(b), who seek to  
19 develop new science and engineering discoveries into new  
20 companies, products, or jobs.

21 (b) APPLICATION.—Each individual who desires a  
22 grant under this section shall submit an application jointly  
23 with the technology transfer office, or other similar office,  
24 at the individual's institution. Such application shall—

1           (1) demonstrate that the eligible institution will  
2           provide to the individual sufficient support in the aid  
3           of developing the specific discovery named in the ap-  
4           plication into a new company or product, or new  
5           jobs, with the aid of the grant under this section;  
6           and

7           (2) be submitted at such time, in such manner,  
8           and containing such additional information as the  
9           Director may require.

10          (c) PRIORITY.—In awarding grants under this sec-  
11          tion, the Director shall give priority to individuals—

12           (1) at institutions that lack a significant proof  
13           of concept fund;

14           (2) who receive or have recently received Fed-  
15           eral research funding; and

16           (3) who demonstrate a capacity to commer-  
17           cialize their research discovery.

18 **SEC. 106. LOANS TO PRIVATE COMPANIES AND INDIVID-**  
19 **UALS.**

20          The Bank may make loans, at competitive interest  
21          rates, to private companies and individual investigators in  
22          order to promote the development of new science and engi-  
23          neering discoveries into new companies, products, or jobs.

1 **SEC. 107. AUTHORITY TO RESCIND FUNDING.**

2 (a) RESCISSION.—The Director shall rescind grants  
3 and loans awarded and loans made to individuals, eligible  
4 entities, or private companies under this title that do not  
5 use such grants or loans to make reasonable attempts to  
6 develop discoveries into new companies, products, or jobs.

7 (b) REPAYMENT.—The Director shall require the re-  
8 payment of grants and loans made under this section from  
9 individuals, eligible entities, and private companies that  
10 are significantly unsuccessful at creating new companies,  
11 products, or jobs.

12 **TITLE II—IMPROVING SCIENCE**  
13 **AND TECHNOLOGY JOB**  
14 **TRAINING**

15 **SEC. 201. IMPROVING SCIENCE AND TECHNOLOGY JOB**  
16 **TRAINING.**

17 Section 510 of the National Science Foundation Au-  
18 thorization Act of 2010 (42 U.S.C. 1869) is amended by  
19 adding at the end the following:

20 “(e) ADDITIONAL INDUSTRY-FOCUSED IGERT PRO-  
21 GRAM FUNDING AUTHORIZED.—

22 “(1) IN GENERAL.—The Director of the Na-  
23 tional Science Foundation shall award grants, on a  
24 competitive basis, to eligible institutions to enable  
25 such institutions to support students who perform

1 some or all of their graduate research in an industry  
2 setting.

3 “(2) ELIGIBLE INSTITUTION.—The term ‘eligi-  
4 ble institution’ means an institution of higher edu-  
5 cation that—

6 “(A) is receiving, as of the date of the ap-  
7 plication submitted under paragraph (3), fund-  
8 ing under the Integrative Graduate Education  
9 and Research Traineeship (referred to as  
10 ‘IGERT’) program; and

11 “(B) enrolls students who are interested in  
12 performing some or all of their graduate re-  
13 search in an industry setting.

14 “(3) APPLICATION.—An eligible institution that  
15 desires to receive a grant under this subsection shall  
16 submit an application to the Director of the Na-  
17 tional Science Foundation at such time, in such  
18 manner, and accompanied by such information as  
19 the Director may require.

20 “(4) PEER REVIEW AND PRIORITY.—In award-  
21 ing grants under this subsection, the Director of the  
22 National Science Foundation shall—

23 “(A) consider the recommendations from a  
24 peer-review process; and

1           “(B) give priority to eligible institutions  
2           that—

3                   “(i) have strong pre-existing relation-  
4                   ships with companies that are located near  
5                   the institution and with companies whose  
6                   research, development, and products are  
7                   related to the type of research training  
8                   that the institution’s IGERT supports; and

9                   “(ii) are likely to find career place-  
10                  ments in industry for students described in  
11                  paragraph (2)(B).

12           “(5) RENEWAL.—Grants awarded under this  
13           subsection may be renewed on a similar timeframe  
14           as other IGERT programs.

15           “(6) USE OF FUNDS.—An eligible institution  
16           that receives funding under this subsection shall use  
17           such funding to award grants to, and otherwise sup-  
18           port, students who pursue graduate research in an  
19           industry setting.”.

20 **SEC. 202. INDUSTRY-RELATED REQUIREMENTS FOR CER-**  
21 **TAIN GRADUATE RESEARCH FELLOWSHIPS.**

22           (a) TRAINING REQUIREMENT.—An institution of  
23           higher education that enrolls students who receive funding  
24           under a National Science Foundation graduate research  
25           fellowship, a National Institutes of Health national re-

1 search service award, or any Federal program that pro-  
2 vides funding to train students at the graduate level for  
3 careers in scientific research and development in either an  
4 academic, nonprofit, or industry setting, shall provide stu-  
5 dents who are receiving such funding with training related  
6 to—

- 7 (1) intellectual property protection;
- 8 (2) commercialization; and
- 9 (3) the development of science discoveries.

10 (b) TRAINING PROGRAM COMPONENTS.—The train-  
11 ing described in subsection (a) shall include the provision  
12 of information about:

- 13 (1) The importance of disclosing discoveries and  
14 filing for patents.
- 15 (2) Obtaining proof of concept or development  
16 funding.
- 17 (3) The characteristics that make a scientific  
18 discovery attractive to private investment.
- 19 (4) Resources that may assist researchers in  
20 creating a new start-up company.

21 (c) EXCEPTION.—An institution of higher education  
22 that enrolls fewer than 6 students who receive funding  
23 under a National Science Foundation graduate research  
24 fellowship, a National Institutes of Health national re-  
25 search service award, or any Federal program that pro-

1 vides funding to train students at the graduate level for  
 2 careers in scientific research and development in either an  
 3 academic, nonprofit, or industry setting shall be exempted  
 4 from the requirements described in subsection (a).

5 (d) GRANTS AUTHORIZED.—The Director of the Na-  
 6 tional Science Foundation shall award grants to institu-  
 7 tions of higher education, as defined in section 101(a) of  
 8 the Higher Education Act of 1965 (20 U.S.C. 1001(a)),  
 9 that are subject to the requirements described in sub-  
 10 section (a) to enable such institutions to develop the cur-  
 11 ricula necessary to fulfill such requirements.

## 12 **TITLE III—GRANTS FOR** 13 **CURRICULUM DEVELOPMENT**

### 14 **SEC. 301. GRANTS FOR CURRICULUM DEVELOPMENT OF** 15 **PROFESSIONAL SCIENCE MASTERS PRO-** 16 **GRAMS AT THE NATIONAL SCIENCE FOUNDA-** 17 **TION.**

18 The National Science Foundation Authorization Act  
 19 of 2010 (42 U.S.C. 1861 note et seq.) is amended by add-  
 20 ing at the end the following:



1 **“SEC. 528. GRANTS FOR CURRICULUM DEVELOPMENT OF**  
2 **PROFESSIONAL SCIENCE MASTERS PRO-**  
3 **GRAMS AT THE NATIONAL SCIENCE FOUNDA-**  
4 **TION.**

5 “(a) GRANTS AUTHORIZED.—The Director of the  
6 National Science Foundation shall award grants to insti-  
7 tutions of higher education to enable such institutions to  
8 develop professional science masters programs.

9 “(b) PROFESSIONAL SCIENCE MASTERS PROGRAM.—  
10 Each professional science masters program developed with  
11 funds awarded under subsection (a) shall—

12 “(1) be a masters degree program;

13 “(2) prepare students for a career in business,  
14 industry, or at a nonprofit organization;

15 “(3) provide students with research experiences,  
16 internship experiences, and the skills needed to suc-  
17 ceed in business, industry, and nonprofit organiza-  
18 tions;

19 “(4) prepare students to be part of a workforce  
20 in the United States that—

21 “(A) is well-trained in science, technology,  
22 engineering, and mathematics; and

23 “(B) responds to the changing needs of so-  
24 ciety and employers;

25 “(5) prepare students in the areas of science,  
26 technology, engineering, and mathematics where

1       there is a high or emerging need for knowledgeable  
2       and skilled employees;

3             “(6) involve a diverse group of faculty members  
4       that—

5             “(A) have appropriate research and teach-  
6       ing expertise in the fields of science, technology,  
7       engineering, and mathematics; and

8             “(B) includes instructors who have exper-  
9       tise specifically relevant to preparing students  
10       for careers in business, industry, and nonprofit  
11       organizations;

12            “(7) provide students with practical skills train-  
13       ing that meets the needs of employers; and

14            “(8) create partnerships between academic in-  
15       stitutions and potential employers to determine  
16       jointly high-need areas of science, technology, engi-  
17       neering, and mathematics, as well as the kinds of  
18       training needed for careers in such areas.

19       “(c) PRIORITY.—In awarding grants under this sec-  
20       tion, the Director of the National Science Foundation  
21       shall award grants through a competitive, peer-reviewed  
22       process and give priority to institutions of higher edu-  
23       cation that demonstrate a commitment to implementing

- 1 and sustaining the teaching of the curriculum developed
- 2 through the grant program.”.

