

106TH CONGRESS  
1ST SESSION

# S. 1110

To amend the Public Health Service Act to establish the National Institute of Biomedical Imaging and Engineering.

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IN THE SENATE OF THE UNITED STATES

MAY 24, 1999

Mr. LOTT introduced the following bill; which was read twice and referred to the Committee on Health, Education, Labor, and Pensions

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## A BILL

To amend the Public Health Service Act to establish the National Institute of Biomedical Imaging and Engineering.

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 “National Institute of  
5 Biomedical Imaging and Engineering Establishment Act”.

6 **SEC. 2. FINDINGS.**

7 The Congress makes the following findings:

8 (1) Basic research in imaging, bioengineering,  
9 computer science, informatics, and related fields is  
10 critical to improving health care but is fundamen-

1 tally different from the research in molecular biology  
2 on which the current national research institutes at  
3 the National Institutes of Health (referred to in this  
4 section as the “NIH”) are based. To ensure the de-  
5 velopment of new techniques and technologies for  
6 the 21st century, these disciplines therefore require  
7 an identity and research home at the NIH that is  
8 independent of the existing institute structure.

9 (2) Advances based on medical research prom-  
10 ise new, more effective treatments for a wide variety  
11 of diseases, but the development of new, noninvasive  
12 imaging techniques for earlier detection and diag-  
13 nosis of disease is essential to take full advantage of  
14 such new treatments and to promote the general im-  
15 provement of health care.

16 (3) The development of advanced genetic and  
17 molecular imaging techniques is necessary to con-  
18 tinue the current rapid pace of discovery in molec-  
19 ular biology.

20 (4) Advances in telemedicine, and teleradiology  
21 in particular, are increasingly important in the deliv-  
22 ery of high quality, reliable medical care to rural  
23 citizens and other underserved populations. To fulfill  
24 the promise of telemedicine and related technologies  
25 fully, a structure is needed at the NIH to support

1 basic research focused on the acquisition, trans-  
2 mission, processing, and optimal display of images.

3 (5) A number of Federal departments and  
4 agencies support imaging and engineering research  
5 with potential medical applications, but a central co-  
6 ordinating body, preferably housed at the NIH, is  
7 needed to coordinate these disparate efforts and fa-  
8 cilitate the transfer of technologies with medical ap-  
9 plications.

10 (6) Several breakthrough imaging technologies,  
11 including magnetic resonance imaging (MRI) and  
12 computed tomography (CT), have been developed  
13 primarily abroad, in large part because of the ab-  
14 sence of a home at the NIH for basic research in  
15 imaging and related fields. The establishment of a  
16 central focus for imaging and bioengineering re-  
17 search at the NIH would promote both scientific ad-  
18 vance and U.S. economic development.

19 (7) At a time when a consensus exists to add  
20 significant resources to the NIH in coming years, it  
21 is appropriate to modernize the structure of the  
22 NIH to ensure that research dollars are expended  
23 more effectively and efficiently and that the fields of  
24 medical science that have contributed the most to

1 the detection, diagnosis, and treatment of disease in  
2 recent years receive appropriate emphasis.

3 (8) The establishment of a National Institute of  
4 Biomedical Imaging and Engineering at the NIH  
5 would accelerate the development of new tech-  
6 nologies with clinical and research applications, im-  
7 prove coordination and efficiency at the NIH and  
8 throughout the Federal Government, reduce duplica-  
9 tion and waste, lay the foundation for a new medical  
10 information age, promote economic development, and  
11 provide a structure to train the young researchers  
12 who will make the pathbreaking discoveries of the  
13 next century.

14 **SEC. 3. ESTABLISHMENT OF NATIONAL INSTITUTE OF BIO-**  
15 **MEDICAL IMAGING AND ENGINEERING.**

16 (a) IN GENERAL.—Part C of title IV of the Public  
17 Health Service Act (42 U.S.C. 285 et seq.) is amended  
18 by adding at the end the following:

19 “Subpart 18—National Institute of Biomedical Imaging  
20 and Engineering

21 **“SEC. 464Z. PURPOSE OF THE INSTITUTE.**

22 “(a) IN GENERAL.—The general purpose of the Na-  
23 tional Institute of Biomedical Imaging and Engineering  
24 (in this section referred to as the ‘Institute’) is the conduct  
25 and support of research, training, the dissemination of

1 health information, and other programs with respect to  
2 biomedical imaging, biomedical engineering, and associ-  
3 ated technologies and modalities with biomedical applica-  
4 tions (in this section referred to as ‘biomedical imaging  
5 and engineering’).

6 “(b) NATIONAL BIOMEDICAL IMAGING AND ENGI-  
7 NEERING PROGRAM.—

8 “(1) ESTABLISHMENT.—The Director of the  
9 Institute, with the advice of the Institute’s advisory  
10 council, shall establish a National Biomedical Imag-  
11 ing and Engineering Program (in this section re-  
12 ferred to as the ‘Program’).

13 “(2) ACTIVITIES.—Activities under the Pro-  
14 gram shall include the following with respect to bio-  
15 medical imaging and engineering:

16 “(A) Research into the development of new  
17 techniques and devices.

18 “(B) Related research in physics, engineer-  
19 ing, mathematics, computer science, and other  
20 disciplines.

21 “(C) Technology assessments and out-  
22 comes studies to evaluate the effectiveness of  
23 biologics, materials, processes, devices, proce-  
24 dures, and informatics.

1           “(D) Research in screening for diseases  
2 and disorders.

3           “(E) The advancement of existing imaging  
4 and engineering modalities, including imaging,  
5 biomaterials, and informatics.

6           “(F) The development of target-specific  
7 agents to enhance images and to identify and  
8 delineate disease.

9           “(G) The development of advanced engi-  
10 neering and imaging technologies and tech-  
11 niques for research from the molecular and ge-  
12 netic to the whole organ and body levels.

13           “(H) The development of new techniques  
14 and devices for more effective interventional  
15 procedures (such as image-guided interven-  
16 tions).

17           “(3) PLAN.—

18           “(A) IN GENERAL.—With respect to the  
19 Program, the Director of the Institute shall  
20 prepare and transmit to the Secretary and the  
21 Director of NIH a plan to initiate, expand, in-  
22 tensify, and coordinate activities of the Institute  
23 with respect to biomedical imaging and engi-  
24 neering. The plan shall include such comments  
25 and recommendations as the Director of the In-

1           stitute determines appropriate. The Director of  
2           the Institute shall periodically review and revise  
3           the plan and shall transmit any revisions of the  
4           plan to the Secretary and the Director of NIH.

5           “(B) RECOMMENDATIONS.—The plan  
6           under subparagraph (A) shall include the rec-  
7           ommendations of the Director of the Institute  
8           with respect to the following:

9                   “(i) Where appropriate, the consolida-  
10                  tion of programs of the National Institutes  
11                  of Health for the express purpose of en-  
12                  hancing support of activities regarding  
13                  basic biomedical imaging and engineering  
14                  research.

15                  “(ii) The coordination of the activities  
16                  of the Institute with related activities of  
17                  the other agencies of the National Insti-  
18                  tutes of Health and with related activities  
19                  of other Federal agencies.

20           “(c) ADVISORY COUNCIL.—The establishment under  
21           section 406 of an advisory council for the Institute is sub-  
22           ject to the following:

23                   “(1) The number of members appointed by the  
24                  Secretary shall be 12.

25                   “(2) Of such members—

1           “(A) 6 members shall be scientists, engi-  
2           neers, physicians, and other health professionals  
3           who represent disciplines in biomedical imaging  
4           and engineering and who are not officers or em-  
5           ployees of the United States; and

6           “(B) 6 members shall be scientists, engi-  
7           neers, physicians, and other health professionals  
8           who represent other disciplines and are knowl-  
9           edgeable about the applications of biomedical  
10          imaging and engineering in medicine, and who  
11          are not officers or employees of the United  
12          States.

13          “(3) EX OFFICIO MEMBERS.—In addition to the  
14          ex officio members specified in section 406(b)(2), the  
15          ex officio members of the advisory council shall in-  
16          clude the Director of the Centers for Disease Con-  
17          trol and Prevention, the Director of the National  
18          Science Foundation, and the Director of the Na-  
19          tional Institute of Standards and Technology (or the  
20          designees of such officers).

21          “(d) AUTHORIZATION OF APPROPRIATIONS.—

22                 “(1) IN GENERAL.—Subject to paragraph (2),  
23          for the purpose of carrying out this section:

24                         “(A) For fiscal year 2000, there is author-  
25                         ized to be appropriated an amount equal to the

1 amount obligated by the National Institutes of  
2 Health during fiscal year 1999 for biomedical  
3 imaging and engineering, except that such  
4 amount shall be adjusted to offset any inflation  
5 occurring after October 1, 1998.

6 “(B) For each of the fiscal years 2001 and  
7 2002, there is authorized to be appropriated an  
8 amount equal to the amount appropriated  
9 under subparagraph (A) for fiscal year 2000,  
10 except that such amount shall be adjusted for  
11 the fiscal year involved to offset any inflation  
12 occurring after October 1, 1999.

13 “(2) REDUCTION.—The authorization of appro-  
14 priations for a fiscal year under paragraph (1) is  
15 hereby reduced by the amount of any appropriation  
16 made for such year for the conduct or support by  
17 any other national research institute of any program  
18 with respect to biomedical imaging and engineer-  
19 ing.”.

20 (b) USE OF EXISTING RESOURCES.—In providing for  
21 the establishment of the National Institute of Biomedical  
22 Imaging and Engineering pursuant to the amendment  
23 made by subsection (a), the Director of the National Insti-  
24 tutes of Health (referred to in this subsection as the  
25 “NIH”)—

1           (1) may transfer to the National Institute of  
2           Biomedical Imaging and Engineering such personnel  
3           of the NIH as the Director determines to be appro-  
4           priate;

5           (2) may, for quarters for such Institute, utilize  
6           such facilities of the NIH as the Director determines  
7           to be appropriate; and

8           (3) may obtain administrative support for the  
9           Institute from the other agencies of the NIH, includ-  
10          ing the other national research institutes.

11          (c) CONSTRUCTION OF FACILITIES.—None of the  
12          provisions of this Act or the amendments made by the Act  
13          may be construed as authorizing the construction of facili-  
14          ties, or the acquisition of land, for purposes of the estab-  
15          lishment or operation of the National Institute of Bio-  
16          medical Imaging and Engineering.

17          (d) DATE CERTAIN FOR ESTABLISHMENT OF ADVI-  
18          SORY COUNCIL.—Not later than 90 days after the effec-  
19          tive date of this Act, the Secretary of Health and Human  
20          Services shall complete the establishment of an advisory  
21          council for the National Institute of Biomedical Imaging  
22          and Engineering in accordance with section 406 of the  
23          Public Health Service Act and in accordance with section  
24          464Z of such Act (as added by subsection (a) of this sec-  
25          tion).

1           (e) CONFORMING AMENDMENT.—Section 401(b)(1)  
2 of the Public Health Service Act (42 U.S.C. 281(b)(1))  
3 is amended by adding at the end the following:

4                   “(R) The National Institute of Biomedical Im-  
5           aging and Engineering.”.

6 **SEC. 4. EFFECTIVE DATE.**

7           This Act shall take effect on October 1, 1999, or  
8 upon the date of the enactment of this Act, whichever oc-  
9 curs later.

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