

participate in the Administration’s aeronautics and space projects by supporting and enhancing science and engineering education, research, and public outreach efforts.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3388.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
40311 .....	42 U.S.C. 17781(c).	Pub. L. 110–422, title VII, § 704(c), Oct. 15, 2008, 122 Stat. 4803.

**CHAPTER 405—BIOMEDICAL RESEARCH IN SPACE**

Sec.

- 40501. Biomedical research joint working group.
- 40502. Biomedical research grants.
- 40503. Biomedical research fellowships.
- 40504. Establishment of electronic data archive.
- 40505. Establishment of emergency medical service telemedicine capability.

**§ 40501. Biomedical research joint working group**

(a) ESTABLISHMENT.—The Administrator and the Director of the National Institutes of Health shall jointly establish a working group to coordinate biomedical research activities in areas where a microgravity environment may contribute to significant progress in the understanding and treatment of diseases and other medical conditions. The joint working group shall formulate joint and complementary programs in such areas of research.

(b) MEMBERSHIP.—The joint working group shall include equal representation from the Administration and the National Institutes of Health, and shall include representation from National Institutes of Health councils, as selected by the Director of the National Institutes of Health, and from the National Aeronautics and Space Administration Advisory Council.

(c) ANNUAL BIOMEDICAL RESEARCH SYMPOSIA.—The joint working group shall organize annual symposia on biomedical research described in subsection (a) under the joint sponsorship of the Administration and the National Institutes of Health.

(d) ANNUAL REPORTING REQUIREMENT.—The joint working group shall report annually to Congress on its progress in carrying out this section.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3389.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
40501 .....	42 U.S.C. 2487a.	Pub. L. 102–588, title VI, § 602, Nov. 4, 1992, 106 Stat. 5130.

FINDINGS

Pub. L. 102–588, title VI, § 601, Nov. 4, 1992, 106 Stat. 5130, provided that: “The Congress finds that—

“(1) the space program can make significant contributions to selected areas of health-related research and should be an integral part of the Nation’s health research and development program;

“(2) the continuing development of trained scientists and engineers is essential to carrying out an effective and sustained program of biomedical research in space and on the ground;

“(3) the establishment and maintenance of an electronically accessible archive of data on space-related biomedical research is essential to advancement of the field;

“(4) cooperation with the republics of the former Soviet Union, including use of former Soviet orbital facilities, offers the potential for greatly enhanced biomedical research activities and progress; and

“(5) the establishment and maintenance of an international telemedicine consultation satellite capability to support emergency medical service provision can provide an important aid to disaster relief efforts.”

**§ 40502. Biomedical research grants**

(a) ESTABLISHMENT OF PROGRAM.—The Administrator and the Director of the National Institutes of Health shall establish a joint program of biomedical research grants in areas described in section 40501(a) of this title, where such research requires access to a microgravity environment. Such program shall be consistent with actions taken by the joint working group under section 40501 of this title.

(b) RESEARCH OPPORTUNITY ANNOUNCEMENTS.—The grants program established under subsection (a) shall annually issue joint research opportunity announcements under the sponsorship of the National Institutes of Health and the Administration. Responses to the announcements shall be evaluated by a peer review committee whose members shall be selected by the Director of the National Institutes of Health and the Administrator, and shall include individuals not employed by the Administration or the National Institutes of Health.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3389.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
40502 .....	42 U.S.C. 2487b.	Pub. L. 102–588, title VI, § 603, Nov. 4, 1992, 106 Stat. 5130.

**§ 40503. Biomedical research fellowships**

The Administrator and the Director of the National Institutes of Health shall create a joint program of graduate research fellowships in biomedical research described in section 40501(a) of this title. Fellowships under such program may provide for participation in approved research conferences and symposia.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3389.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
40503 .....	42 U.S.C. 2487c.	Pub. L. 102–588, title VI, § 604, Nov. 4, 1992, 106 Stat. 5131.

**§ 40504. Establishment of electronic data archive**

The Administrator shall create and maintain a national electronic data archive for biomedical research data obtained from space-based experiments.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3389.)

HISTORICAL AND REVISION NOTES

Revised Section	Source (U.S. Code)	Source (Statutes at Large)
40504 .....	42 U.S.C. 2487e.	Pub. L. 102-588, title VI, § 606, Nov. 4, 1992, 106 Stat. 5131.

**§ 40505. Establishment of emergency medical service telemedicine capability**

The Administrator, the Administrator of the Federal Emergency Management Agency, the Director of the Office of Foreign Disaster Assistance, and the Surgeon General of the United States shall jointly create and maintain an international telemedicine satellite consultation capability to support emergency medical services in disaster-stricken areas.

(Pub. L. 111-314, § 3, Dec. 18, 2010, 124 Stat. 3389.)

HISTORICAL AND REVISION NOTES

Revised Section	Source (U.S. Code)	Source (Statutes at Large)
40505 .....	42 U.S.C. 2487f.	Pub. L. 102-588, title VI, § 607, Nov. 4, 1992, 106 Stat. 5131; Pub. L. 109-295, title VI, § 612(c), Oct. 4, 2006, 120 Stat. 1410.

The words “Office of Foreign Disaster Assistance” are substituted for “Office of Foreign Disaster” to correct an error in the law.

**CHAPTER 407—ENVIRONMENTALLY FRIENDLY AIRCRAFT**

- Sec. 40701. Research and development initiative.
- 40702. Additional research and development initiative.
- 40703. Research alignment.
- 40704. Research program on perceived impact of sonic booms.

**§ 40701. Research and development initiative**

The Administrator may establish an initiative with the objective of developing, and demonstrating in a relevant environment, technologies to enable the following commercial aircraft performance characteristics:

- (1) NOISE LEVELS.—Noise levels on takeoff and on airport approach and landing that do not exceed ambient noise levels in the absence of flight operations in the vicinity of airports from which such commercial aircraft would normally operate.
- (2) ENERGY CONSUMPTION.—Twenty-five percent reduction in the energy required for medium- to long-range flights, compared to aircraft in commercial service as of December 30, 2005.
- (3) EMISSIONS.—Nitrogen oxides on take-off and landing that are significantly reduced, without adversely affecting hydrocarbons and smoke, relative to aircraft in commercial service as of December 30, 2005.

(Pub. L. 111-314, § 3, Dec. 18, 2010, 124 Stat. 3390.)

HISTORICAL AND REVISION NOTES

Revised Section	Source (U.S. Code)	Source (Statutes at Large)
40701 .....	42 U.S.C. 16722(a).	Pub. L. 109-155, title IV, § 422(a), Dec. 30, 2005, 119 Stat. 2924.

In paragraphs (2) and (3), the date “December 30, 2005” is substituted for “the date of enactment of this Act” to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109-155, 119 Stat. 2895).

**§ 40702. Additional research and development initiative**

The Administrator shall establish an initiative involving the Administration, universities, industry, and other research organizations as appropriate, of research, development, and demonstration, in a relevant environment, of technologies to enable the following commercial aircraft performance characteristics:

- (1) NOISE LEVELS.—Noise levels on takeoff and on airport approach and landing that do not exceed ambient noise levels in the absence of flight operations in the vicinity of airports from which such commercial aircraft would normally operate, without increasing energy consumption or nitrogen oxide emissions compared to aircraft in commercial service as of October 15, 2008.
- (2) GREENHOUSE GAS EMISSIONS.—Significant reductions in greenhouse gas emissions compared to aircraft in commercial services as of October 15, 2008.

(Pub. L. 111-314, § 3, Dec. 18, 2010, 124 Stat. 3390.)

HISTORICAL AND REVISION NOTES

Revised Section	Source (U.S. Code)	Source (Statutes at Large)
40702 .....	42 U.S.C. 17721.	Pub. L. 110-422, title III, § 302, Oct. 15, 2008, 122 Stat. 4786.

In paragraphs (1) and (2), the date “October 15, 2008” is substituted for “the date of enactment of this Act” to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2008 (Public Law 110-422, 122 Stat. 4779).

**§ 40703. Research alignment**

In addition to pursuing the research and development initiative described in section 40702 of this title, the Administrator shall, to the maximum extent practicable within available funding, align the fundamental aeronautics research program to address high priority technology challenges of the National Academies’ Decadal Survey of Civil Aeronautics, and shall work to increase the degree of involvement of external organizations, and especially of universities, in the fundamental aeronautics research program.

(Pub. L. 111-314, § 3, Dec. 18, 2010, 124 Stat. 3390.)

HISTORICAL AND REVISION NOTES

Revised Section	Source (U.S. Code)	Source (Statutes at Large)
40703 .....	42 U.S.C. 17722.	Pub. L. 110-422, title III, § 303, Oct. 15, 2008, 122 Stat. 4787.

**§ 40704. Research program on perceived impact of sonic booms**

(a) ESTABLISHMENT.—The Administrator shall establish a cooperative research program with industry, including the conduct of flight demonstrations in a relevant environment, to collect data on the perceived impact of sonic