

TABLE 86

**Federal obligations for research and experimental development to foreign performers, by region, country, or economy, and agency: FY 2019**

(Dollars in thousands)

Region, country, or economy	Total	DHS	DOD	DOE	HHS	NASA	NSF	USDA	Other <sup>a</sup>
All areas and organizations	937,206.1	9,962.2	543,731.2	1,881.0	264,991.6	33,280.2	25,051.8	3,082.9	55,225.1
Africa	86,774.6	0.0	599.0	0.0	85,069.7	0.8	0.0	105.1	1,000.0
Botswana	1,106.7	0.0	0.0	0.0	1,106.7	0.0	0.0	0.0	0.0
Congo, Democratic Republic of the	135.0	0.0	0.0	0.0	135.0	0.0	0.0	0.0	0.0
Côte d'Ivoire	33.5	0.0	0.0	0.0	0.0	0.0	0.0	33.5	0.0
Egypt	1,000.0	0.0	0.0	0.0	*	0.0	0.0	0.0	1,000.0
Eritrea	225.0	0.0	0.0	0.0	225.0	0.0	0.0	0.0	0.0
Ethiopia	1,381.2	0.0	0.0	0.0	1,381.2	0.0	0.0	0.0	0.0
Gambia, The	103.4	0.0	0.0	0.0	103.4	0.0	0.0	0.0	0.0
Ghana	3,987.8	0.0	0.0	0.0	3,987.8	0.0	0.0	0.0	0.0
Kenya	4,522.3	0.0	233.8	0.0	4,234.5	0.0	0.0	54.0	0.0
Madagascar	134.7	0.0	0.0	0.0	134.7	0.0	0.0	0.0	0.0
Malawi	846.5	0.0	0.0	0.0	846.5	0.0	0.0	0.0	0.0
Mali	2,438.4	0.0	0.0	0.0	2,438.4	0.0	0.0	0.0	0.0
Mozambique	1,421.9	0.0	0.0	0.0	1,421.9	0.0	0.0	0.0	0.0
Namibia	31.0	0.0	0.0	0.0	30.2	0.8	0.0	0.0	0.0
Nigeria	6,680.5	0.0	0.0	0.0	6,680.5	0.0	0.0	0.0	0.0
Rwanda	715.9	0.0	0.0	0.0	715.9	0.0	0.0	0.0	0.0
Senegal	537.1	0.0	0.0	0.0	537.1	0.0	0.0	0.0	0.0
South Africa	46,860.6	0.0	365.2	0.0	46,477.9	0.0	0.0	17.6	0.0
Tanzania	1,928.1	0.0	0.0	0.0	1,928.1	0.0	0.0	0.0	0.0
Uganda	9,762.2	0.0	0.0	0.0	9,762.2	0.0	0.0	0.0	0.0
Zambia	1,443.9	0.0	0.0	0.0	1,443.9	0.0	0.0	0.0	0.0
Zimbabwe	1,478.8	0.0	0.0	0.0	1,478.8	0.0	0.0	0.0	0.0
Asia	300,512.8	2,125.7	271,568.1	268.5	25,648.1	295.3	0.0	602.6	4.6
Bangladesh	4,529.1	0.0	0.0	0.0	4,529.1	0.0	0.0	0.0	0.0
Bhutan	38.7	0.0	38.7	0.0	0.0	0.0	0.0	0.0	0.0
China	1,912.5	0.0	6.9	0.0	1,816.5	0.0	0.0	89.1	0.0
Cyprus	212.0	0.0	212.0	0.0	0.0	0.0	0.0	0.0	0.0
Georgia	239.3	0.0	7.2	0.0	232.1	0.0	0.0	0.0	0.0
Hong Kong	2,504.9	0.0	0.3	0.0	2,500.0	0.0	0.0	0.0	4.6
India	4,291.7	0.0	1,221.8	0.0	3,070.0	0.0	0.0	0.0	0.0
Indonesia	300.0	0.0	0.0	0.0	300.0	0.0	0.0	0.0	0.0
Israel	259,232.9	2,125.7	255,193.0	268.5	964.5	200.3	0.0	480.8	0.0
Japan	4,028.4	0.0	3,673.4	0.0	289.3	65.6	0.0	0.0	0.0
Korea, South	1,999.3	0.0	1,922.3	0.0	54.0	0.0	0.0	23.0	0.0
Lebanon	153.1	0.0	0.0	0.0	153.1	0.0	0.0	0.0	0.0
Malaysia	324.7	0.0	189.4	0.0	135.3	0.0	0.0	0.0	0.0
Mongolia	32.0	0.0	32.0	0.0	0.0	0.0	0.0	0.0	0.0
Nepal	196.2	0.0	0.0	0.0	196.2	0.0	0.0	0.0	0.0
Pakistan	147.4	0.0	0.0	0.0	147.4	0.0	0.0	0.0	0.0
Philippines	1,113.7	0.0	1,113.7	0.0	0.0	0.0	0.0	0.0	0.0
Saudi Arabia	123.1	0.0	113.5	0.0	0.0	0.0	0.0	9.7	0.0
Singapore	1,802.0	0.0	1,772.7	0.0	0.0	29.3	0.0	0.0	0.0
Sri Lanka	394.7	0.0	0.0	0.0	394.7	0.0	0.0	0.0	0.0
Taiwan	777.9	0.0	777.9	0.0	0.0	0.0	0.0	0.0	0.0
Thailand	12,661.6	0.0	2,972.1	0.0	9,689.5	0.0	0.0	0.0	0.0
Turkey	228.0	0.0	228.0	0.0	0.0	0.0	0.0	0.0	0.0
Uzbekistan	49.0	0.0	0.0	0.0	49.0	0.0	0.0	0.0	0.0

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(Dollars in thousands)

Region, country, or economy	Total	DHS	DOD	DOE	HHS	NASA	NSF	USDA	Other <sup>a</sup>
Vietnam	1,368.5	0.0	256.1	0.0	1,112.3	0.0	0.0	0.0	0.0
Asian countries, other	1,852.2	0.0	1,837.2	0.0	15.0	0.0	0.0	0.0	0.0
Europe	307,258.3	3,547.4	183,598.7	1,193.0	67,574.6	29,634.2	15,188.9	763.1	5,758.3
Austria	5,530.6	0.0	1,798.1	0.0	0.0	1,219.5	2,512.9	0.0	0.0
Belgium	3,325.3	0.0	535.8	0.0	283.8	2,505.7	0.0	0.0	0.0
Croatia	320.1	0.0	320.1	0.0	0.0	0.0	0.0	0.0	0.0
Czechia	2,954.5	0.0	2,953.2	0.0	0.0	1.3	0.0	0.0	0.0
Denmark	2,869.3	0.0	1,228.5	0.0	642.1	992.7	0.0	0.0	6.0
Estonia	527.1	0.0	527.1	0.0	0.0	0.0	0.0	0.0	0.0
Finland	1,554.0	0.0	681.3	0.0	861.4	11.3	0.0	0.0	0.0
France	23,044.9	0.0	13,488.3	10.0	7,782.6	97.2	1,487.9	130.9	48.0
Germany	32,502.6	0.0	5,845.0	0.0	17,285.4	1,350.4	7,900.0	121.9	0.0
Greece	447.0	0.0	429.0	0.0	0.0	0.0	0.0	18.0	0.0
Hungary	180.8	0.0	180.8	0.0	0.0	0.0	0.0	0.0	0.0
Ireland	872.7	0.0	383.9	0.0	401.6	66.0	0.0	0.0	21.2
Italy	5,681.6	0.0	3,932.7	0.0	1,304.9	0.1	0.0	185.0	258.9
Latvia	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Luxembourg	326.2	0.0	326.2	0.0	0.0	0.0	0.0	0.0	0.0
Netherlands	18,241.5	0.0	3,680.9	0.0	4,850.2	9,360.4	100.0	0.0	250.0
Norway	100,623.2	0.0	95,418.7	0.0	0.0	3,281.2	0.0	0.0	1,923.2
Poland	360.3	0.0	359.8	0.0	0.0	0.0	0.0	0.5	0.0
Romania	60.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0
Russia	5,263.6	0.0	0.0	0.0	0.0	5,263.6	0.0	0.0	0.0
Serbia	66.1	0.0	66.1	0.0	0.0	0.0	0.0	0.0	0.0
Slovenia	265.9	0.0	265.9	0.0	0.0	0.0	0.0	0.0	0.0
Spain	6,821.1	0.0	2,460.4	0.0	135.0	3,955.2	0.0	121.0	149.6
Sweden	7,789.4	0.0	2,659.1	150.8	2,017.3	24.2	2,938.0	0.0	0.0
Switzerland	15,357.7	0.0	2,891.5	484.0	11,508.7	453.5	0.0	20.0	0.0
Ukraine	607.9	0.0	153.7	0.0	454.2	0.0	0.0	0.0	0.0
United Kingdom	71,116.4	3,547.4	42,952.1	0.0	20,047.4	1,052.0	250.1	165.9	3,101.4
European countries, other	548.2	0.0	0.0	548.2	0.0	0.0	0.0	0.0	0.0
North America	123,814.4	4,289.1	54,764.3	419.5	51,718.2	2,293.3	9,055.9	401.4	872.7
Bahamas, The	11,872.9	0.0	11,872.9	0.0	0.0	0.0	0.0	0.0	0.0
Bermuda	6,949.9	0.0	0.0	0.0	0.0	0.0	6,949.9	0.0	0.0
Canada	89,494.9	4,289.1	38,822.1	419.5	40,827.1	2,188.5	1,906.0	169.9	872.7
Costa Rica	7,828.6	0.0	0.0	0.0	7,715.8	14.4	0.0	98.3	0.0
Greenland	90.4	0.0	0.0	0.0	0.0	90.4	0.0	0.0	0.0
Guatemala	1,158.2	0.0	0.0	0.0	1,158.2	0.0	0.0	0.0	0.0
Haiti	1,883.4	0.0	0.0	0.0	1,883.4	0.0	0.0	0.0	0.0
Mexico	4,317.9	0.0	4,059.7	0.0	0.0	0.0	200.0	58.1	0.0
Nicaragua	133.7	0.0	0.0	0.0	133.7	0.0	0.0	0.0	0.0
Panama	75.1	0.0	0.0	0.0	0.0	0.0	0.0	75.1	0.0
Virgin Islands, British	9.5	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0
Oceania	49,311.8	0.0	29,133.1	0.0	18,791.0	870.2	0.0	517.5	0.0
Australia	44,021.6	0.0	27,944.3	0.0	15,049.1	510.8	0.0	517.5	0.0
Fiji	43.5	0.0	43.5	0.0	0.0	0.0	0.0	0.0	0.0
Marshall Islands	227.9	0.0	227.9	0.0	0.0	0.0	0.0	0.0	0.0
New Zealand	5,018.8	0.0	917.5	0.0	3,741.9	359.4	0.0	0.0	0.0
South America	21,220.0	0.0	3,247.7	0.0	16,190.1	186.5	806.9	693.2	95.7

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Region, country, or economy	Total	DHS	DOD	DOE	HHS	NASA	NSF	USDA	Other <sup>a</sup>
Argentina	2,975.0	0.0	116.8	0.0	2,237.1	0.0	0.0	621.2	0.0
Brazil	5,798.4	0.0	1,172.3	0.0	4,513.2	82.9	0.0	30.0	0.0
Chile	2,741.3	0.0	1,795.0	0.0	770.1	80.6	0.0	0.0	95.7
Colombia	977.0	0.0	42.0	0.0	935.0	0.0	0.0	0.0	0.0
Paraguay	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Peru	7,602.8	0.0	121.6	0.0	7,418.1	23.1	0.0	40.0	0.0
Suriname	316.6	0.0	0.0	0.0	316.6	0.0	0.0	0.0	0.0
Uruguay	806.9	0.0	0.0	0.0	0.0	0.0	806.9	0.0	0.0
International organizations	48,314.2	0.0	820.4	0.0	0.0	0.0	0.0	0.0	47,493.8

\* = amount greater than \$0 but less than \$50.

DHS = Department of Homeland Security; DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NSF = National Science Foundation; USDA = Department of Agriculture.

<sup>a</sup> Includes data for the Departments of Commerce, the Interior, and Transportation; the Agency for International Development; the Nuclear Regulatory Commission; and the Social Security Administration.**Note(s):**

Because of rounding, detail may not add to total. Only those countries that had obligations in variables represented by this table appear in the table. See technical table A-2 for additional notes associated with the agencies listed in this table.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.