## TABLE 55

# Federal obligations for research and experimental development to non-U.S. performers, by region, country, or economy, and agency: FY 2022

(Dollars in thousands)

| Region, country, or economy       | Total   | DHS   | DOD     | DOE   | HHS     | NASA   | NSF    | USDA  | Other <sup>a</sup> |
|-----------------------------------|---------|-------|---------|-------|---------|--------|--------|-------|--------------------|
| All areas and organizations       | 817,506 | 3,298 | 239,565 | 2,693 | 416,052 | 26,123 | 21,568 | 6,420 | 101,788            |
| Africa                            | 97,738  | 0     | 4,717   | 0     | 89,873  | *      | 0      | 458   | 2,691              |
| Botswana                          | 908     | 0     | 0       | 0     | 908     | 0      | 0      | 0     | 0                  |
| Cameroon                          | 1,432   | 0     | 0       | 0     | 1,432   | 0      | 0      | 0     | 0                  |
| Congo, Democratic Republic of the | 875     | 0     | 0       | 0     | 875     | 0      | 0      | 0     | 0                  |
| Ethiopia                          | 946     | 0     | 0       | 0     | 946     | 0      | 0      | 0     | 0                  |
| Gambia, The                       | 111     | 0     | 0       | 0     | 111     | 0      | 0      | 0     | 0                  |
| Ghana                             | 2,240   | 0     | 0       | 0     | 2,040   | 0      | 0      | 0     | 200                |
| Kenya                             | 13,448  | 0     | 3,802   | 0     | 6,701   | 0      | 0      | 454   | 2,491              |
| Malawi                            | 1,186   | 0     | 0       | 0     | 1,186   | 0      | 0      | 0     | 0                  |
| Mali                              | 2,030   | 0     | 0       | 0     | 2,030   | 0      | 0      | 0     | 0                  |
| Mozambique                        | 1,563   | 0     | 0       | 0     | 1,563   | 0      | 0      | 0     | 0                  |
| Nigeria                           | 8,153   | 0     | 268     | 0     | 7,885   | 0      | 0      | 0     | 0                  |
| Rwanda                            | 76      | 0     | 0       | 0     | 76      | 0      | 0      | 0     | 0                  |
| Saint Helena                      | *       | 0     | 0       | 0     | 0       | *      | 0      | 0     | 0                  |
| Senegal                           | *       | 0     | 0       | 0     | *       | 0      | 0      | 0     | 0                  |
| South Africa                      | 42,485  | 0     | 547     | 0     | 41,938  | 0      | 0      | 0     | 0                  |
| Tanzania                          | 2,143   | 0     | 0       | 0     | 2,140   | 0      | 0      | 3     | 0                  |
| Uganda                            | 15,941  | 0     | 0       | 0     | 15,941  | 0      | 0      | 0     | 0                  |
| Zambia                            | 2,295   | 0     | 0       | 0     | 2,295   | 0      | 0      | 0     | 0                  |
| Zimbabwe                          | 1,804   | 0     | 0       | 0     | 1,804   | 0      | 0      | 0     | 0                  |
| African countries, other          | 100     | 0     | 100     | 0     | 0       | 0      | 0      | 0     | 0                  |
| Asia                              | 95,851  | 834   | 60,738  | 2     | 31,894  | 22     | 0      | 1,741 | 620                |
| Armenia                           | 166     | 0     | 166     | 0     | 0       | 0      | 0      | 0     | 0                  |
| Bangladesh                        | 7,214   | 0     | 0       | 0     | 7,214   | 0      | 0      | 0     | 0                  |
| Brunei                            | 41      | 0     | 41      | 0     | 0       | 0      | 0      | 0     | 0                  |
| Cambodia                          | 41      | 0     | 41      | 0     | 0       | 0      | 0      | 0     | 0                  |
| China                             | 1,427   | 0     | 0       | 0     | 1,337   | 0      | 0      | 89    | 0                  |
| Georgia                           | 1,386   | 0     | 991     | 0     | 395     | 0      | 0      | 0     | 0                  |
| India                             | 1,239   | 0     | 710     | 2     | 528     | *      | 0      | 0     | 0                  |
| Indonesia                         | 1,053   | 0     | 3       | 0     | 550     | 0      | 0      | 0     | 500                |
| Israel                            | 60,312  | 834   | 47,964  | 0     | 10,132  | 0      | 0      | 1,381 | 0                  |
| Japan                             | 626     | 0     | 601     | 0     | 0       | 5      | 0      | 0     | 20                 |
| Jordan                            | 289     | 0     | 0       | 0     | 289     | 0      | 0      | 0     | 0                  |
| Kazakhstan                        | 1,537   | 0     | 1,537   | 0     | 0       | 0      | 0      | 0     | 0                  |
| Korea, South                      | 832     | 0     | 600     | 0     | 54      | 0      | 0      | 178   | 0                  |
| Laos                              | 4       | 0     | 0       | 0     | 4       | 0      | 0      | 0     | 0                  |
| Lebanon                           | 549     | 0     | 0       | 0     | 549     | 0      | 0      | 0     | 0                  |
| Malaysia                          | 134     | 0     | 0       | 0     | 134     | 0      | 0      | 0     | 0                  |
| Mongolia                          | 791     | 0     | 502     | 0     | 289     | 0      | 0      | 0     | 0                  |
| Nepal                             | 100     | 0     | 0       | 0     | 0       | 0      | 0      | 0     | 100                |
| Oman                              | 56      | 0     | 56      | 0     | 0       | 0      | 0      | 0     | 0                  |
| Pakistan                          | 1,532   | 0     | 0       | 0     | 1,532   | 0      | 0      | 0     | 0                  |
| Philippines                       | 256     | 0     | 256     | 0     | 0       | 0      | 0      | 0     | 0                  |
| Saudi Arabia                      | 20      | 0     | 20      | 0     | 0       | 0      | 0      | 0     | 0                  |
| Singapore                         | 975     | 0     | 975     | 0     | 0       | 0      | 0      | 0     | 0                  |
| Taiwan                            | 2,596   | 0     | 425     | 0     | 2,114   | 17     | 0      | 40    | 0                  |
| Thailand                          | 11,841  | 0     | 5,790   | 0     | 6,050   | 0      | 0      | 0     | 0                  |
| United Arab Emirates              | 50      | 0     | 50      | 0     | 0,000   | 0      | 0      | 0     | 0                  |
| Vietnam                           | 785     | 0     | 10      | 0     | 722     | 0      | 0      | 53    | 0                  |

## TABLE 55

# Federal obligations for research and experimental development to non-U.S. performers, by region, country, or economy, and agency: FY 2022

(Dollars in thousands)

| Region, country, or economy     | Total   | DHS   | DOD    | DOE   | HHS     | NASA   | NSF    | USDA  | Other <sup>a</sup> |
|---------------------------------|---------|-------|--------|-------|---------|--------|--------|-------|--------------------|
| Europe                          | 308,232 | 500   | 78,178 | 2,169 | 183,222 | 17,997 | 1,930  | 1,645 | 22,592             |
| Austria                         | 3,098   | 0     | 560    | 0     | 1,899   | 10     | 69     | 0     | 560                |
| Belgium                         | 858     | 0     | 26     | 0     | 832     | 0      | 0      | 0     | 0                  |
| Croatia                         | 361     | 0     | 361    | 0     | 0       | 0      | 0      | 0     | 0                  |
| Czechia                         | 336     | 0     | 336    | 0     | 0       | 0      | 0      | 0     | 0                  |
| Denmark                         | 4,035   | 0     | 2,303  | 0     | 1,684   | 42     | 0      | 0     | 6                  |
| Estonia                         | 756     | 0     | 756    | 0     | 0       | 0      | 0      | 0     | 0                  |
| Finland                         | 3,638   | 0     | 3,053  | 0     | 585     | 0      | 0      | 0     | 0                  |
| France                          | 113,374 | 0     | 3,701  | 1,386 | 101,423 | 2,917  | 0      | 14    | 3,933              |
| Germany                         | 32,342  | 0     | 6,888  | 10    | 16,584  | 1,058  | 1,369  | 260   | 6,174              |
| Greece                          | 18      | 0     | *      | 0     | 0       | 0      | 0      | 18    | 0                  |
| Iceland                         | 742     | 0     | 38     | 0     | 704     | 0      | 0      | 0     | 0                  |
| Ireland                         | 4,108   | 0     | 2,933  | 0     | 1,149   | 26     | 0      | 0     | 0                  |
| Italy                           | 11,098  | 0     | 9,850  | 0     | 790     | 0      | 0      | 298   | 160                |
| Macedonia                       | 60      | 0     | 60     | 0     | 0       | 0      | 0      | 0     | 0                  |
| Netherlands                     | 14,856  | 0     | 5,639  | 159   | 7,485   | 432    | 0      | 20    | 1,120              |
| Norway                          | 4,611   | 0     | 2,160  | 0     | 0       | 2,449  | 0      | 0     | 2                  |
| Poland                          | 292     | 0     | 116    | 0     | 0       | 135    | 0      | 16    | 25                 |
| Portugal                        | 206     | 0     | 206    | 0     | 0       | 0      | 0      | 0     | 0                  |
| Russia                          | 9,061   | 0     | 0      | 0     | 0       | 9,061  | 0      | 0     | 0                  |
| Slovakia                        | 34      | 0     | 34     | 0     | 0       | 0      | 0      | 0     | 0                  |
| Slovenia                        | 193     | 0     | 190    | 0     | 0       | 3      | 0      | 0     | 0                  |
| Spain                           | 4,502   | 0     | 2,143  | 0     | 592     | 188    | 0      | 590   | 989                |
| Sweden                          | 3,935   | 0     | 1,353  | 0     | 2,494   | 18     | 69     | 0,00  | 0                  |
| Switzerland                     | 31,172  | 0     | 5,812  | 316   | 15,600  | 1,068  | 0      | 0     | 8,376              |
| Ukraine                         | 531     | 0     | 0,012  | 0     | 531     | 0      | 0      | 0     | 0,570              |
| United Kingdom                  | 54,776  | 500   | 20,420 | 297   | 30,870  | 590    | 423    | 429   | 1,247              |
| European countries, other       | 9,241   | 0     | 9,241  | 0     | 0       | 0      | 423    | 429   | 1,247              |
| North America                   | 145,309 | 1,761 | 48,469 | 336   | 70,273  | 5,182  | 10,363 | 1,106 | 7,820              |
| Bahamas, The                    | 12,329  | 0     | 12,329 | 0     | 0,273   | 0      | 10,303 | 0     | 0                  |
| Bermuda                         | 8,376   | 0     | 12,329 | 0     | 0       | 31     | 8,345  | 0     | 0                  |
| Canada                          |         | 1,761 | 35,141 | 336   | 53,909  | -      |        | 462   | 7,548              |
|                                 | 106,326 |       |        |       |         | 5,151  | 2,018  |       |                    |
| Costa Rica                      | 9,987   | 0     | 100    | 0     | 9,587   | 0      | 0      | 300   | 0                  |
| Guatemala                       | 1,854   | 0     | 0      | 0     | 1,854   | 0      | 0      | 0     | 0                  |
| Haiti                           | 2,306   | 0     | 0      | 0     | 2,306   | 0      | 0      | 0     | 0                  |
| Jamaica                         | 117     | 0     | 0      | 0     | 117     | 0      | 0      | 0     | 0                  |
| Mexico                          | 1,653   | 0     | 527    | 0     | 891     | 0      | 0      | 235   | 0                  |
| Panama                          | 179     | 0     | 0      | 0     | 179     | 0      | 0      | 0     | 0                  |
| Saint Kitts and Nevis           | 51      | 0     | 0      | 0     | 51      | 0      | 0      | 0     | 0                  |
| Trinidad and Tobago             | 1,488   | 0     | 0      | 0     | 1,379   | 0      | 0      | 109   | 0                  |
| Turks and Caicos Islands        | 272     | 0     | 0      | 0     | 0       | 0      | 0      | 0     | 272                |
| North American countries, other | 371     | 0     | 371    | 0     | 0       | 0      | 0      | 0     | 0                  |
| Oceania                         | 68,111  | 203   | 39,968 | 186   | 24,699  | 2,069  | 100    | 754   | 131                |
| Australia                       | 65,058  | 203   | 39,277 | 186   | 22,928  | 1,774  | 100    | 544   | 45                 |
| French Polynesia                | 263     | 0     | 0      | 0     | 0       | 263    | 0      | 0     | 0                  |
| Micronesia, Federated States of | 135     | 0     | 0      | 0     | 0       | 0      | 0      | 135   | 0                  |
| New Zealand                     | 2,605   | 0     | 691    | 0     | 1,771   | 32     | 0      | 25    | 85                 |
| Palau                           | 50      | 0     | 0      | 0     | 0       | 0      | 0      | 50    | 0                  |
| South America                   | 19,694  | 0     | 1,516  | 0     | 15,109  | 852    | 0      | 716   | 1,500              |
| Argentina                       | 2,300   | 0     | 43     | 0     | 1,679   | 0      | 0      | 578   | 0                  |

### TABLE 55

## Federal obligations for research and experimental development to non-U.S. performers, by region, country, or economy, and agency: FY 2022

#### (Dollars in thousands)

| Region, country, or economy | Total  | DHS | DOD   | DOE | HHS   | NASA | NSF   | USDA | Other <sup>a</sup> |
|-----------------------------|--------|-----|-------|-----|-------|------|-------|------|--------------------|
| Brazil                      | 4,831  | 0   | 313   | 0   | 3,948 | 521  | 0     | 50   | 0                  |
| Chile                       | 1,756  | 0   | 1,055 | 0   | 563   | 138  | 0     | 0    | 0                  |
| Colombia                    | 2,108  | 0   | 0     | 0   | 2,083 | 0    | 0     | 25   | 0                  |
| Peru                        | 8,593  | 0   | 0     | 0   | 6,837 | 194  | 0     | 63   | 1,500              |
| Suriname                    | 106    | 0   | 106   | 0   | 0     | 0    | 0     | 0    | 0                  |
| International organizations | 82,571 | 0   | 5,979 | 0   | 981   | 0    | 9,175 | 0    | 66,435             |

\* = amount greater than \$0 but less than \$500.

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, Transportation, and the Treasury; 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. FY 2022 obligations include additional funding provided by supplemental COVID-19 pandemic-related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). 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 2022–23.