

Participation Statistics of EU-based Researchers in U.S. National Programmes



About the Link2US Project

Link2US will facilitate easy access to relevant information on U.S. cooperation programmes through electronic communities such as a website, e-newsletter, and virtual helpdesk and designated activities such as training workshops.

The Link2US Project will:

- Map opportunities of U.S. federal collaborative funding schemes and rules for participation through research and analyses.
- Raise awareness among the European scientific community by disseminating information about programmes and funding opportunities through a multi-faceted network.
- Identify and analyze potential obstacles to cooperation through these programmes and funding schemes so that they may be avoided and/or that solutions may be found.

For more information: www.EuUsScienceTechnology.eu/link2US/

Disclaimer

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Executive Summary

The United States (U.S) national science and technology system is highly decentralized, with funding authority spread across a dozen or more executive agencies, cabinet departments, and sub-units. Out of the numerous entities, eleven U.S. programmes covering three agencies have funding programmes that are open to European Union (EU)-based researchers/institutions. In the context of this report, “open” refers to a programme that EU-based researchers/institutions can submit applications to directly receive funding. The *Participation Statistics of EU-Based Researchers in U.S. National Programmes* report focuses primarily on statistics collected from three U.S. federal entities, the U.S. Department of Energy (DOE), the U.S. Department of Homeland Security (DHS), and the U.S. National Institutes of Health (NIH). Statistics for these entities were collected for U.S. fiscal year (FY) 2009. Entities surveyed were identified based on a prior review by the Link2US project of U.S. federal programmes open to EU-based researchers/institutions. The Link2US review surveyed the largest, non-defence related U.S. federal entities that fund research through extramural grants.

Results showed that out of the twenty-seven EU Member States (MS), fourteen received funding from the three U.S. entities. On average, 20-30% of the total number of awards given to internationally-based institutions/researchers were awarded to MS, worth \$49,921,464 USD. NIH awarded the highest number of awards and largest funding total. Out of the fourteen MS receiving funding, the United Kingdom received the highest number of awards, both in total number and from all three agencies, worth \$22,268,251 USD¹. Only one other MS, Germany, received funding from all three entities, worth \$9,495,639 USD. Italy was the only MS to receive funding from two federal entities, DHS and NIH, worth \$1,186,794 USD. The ten other states received funding only from NIH, worth \$16,970,781 USD.

¹ Due to a shared award between the United Kingdom and Italy awarded by the Department of Homeland Security, half of the total amount was allocated into the total awarded FY2009 amount for each MS.

Objective

The United States (U.S) national science and technology system is highly decentralized, with funding authority spread across a dozen or more executive agencies, cabinet departments, and sub-units. Out of the numerous entities and programmes, twelve U.S. funding programmes, covering three entities, the U.S. Department of Energy (DOE), the U.S. Department of Homeland Security (DHS), and the U.S. National Institutes of Health (NIH), are open for European Union (EU)-based researcher/institution participation. In the context of this report, “open” refers to a programme that EU-based researchers/institutions can submit applications to directly receive funding.

The main objective of the *Participation Statistics of EU-Based Researchers in U.S. National Programmes* is to track the number, funding amount, type of grant, and country breakdown, where available, of EU-based researchers/institutions receiving grants. This report is the first of two reports that seek to track these statistics over thirty-six months for fiscal years (FY)² 2009-2011.

Methodology

Participation Statistics of EU-Based Researchers in U.S. National Programmes focuses on statistics collected from U.S. federal entities for FY2009. Data for the first half of FY2010 was not consistently available across surveyed entities and therefore is not included in this report but will be included in the next report. Entities surveyed were identified based on a prior review by the Link2US project of U.S. federal programmes open to EU-based researchers/institutions. The Link2US review surveyed the largest, non-defence-related U.S. federal entities that fund research through extramural grants.³

Department of Energy

Data from DOE was received from its centralized procurement office. Available information includes a breakdown of grants by country, funding amount, and number of grants. Individual principal investigator (PI) data was not consistently available. While multiple sub-programmes within DOE are open to EU-based researchers/institutions, grant information was not available by individual programme.

Department of Homeland Security

Data for DHS was received from the Science and Technology (S&T) Directorate’s International Cooperative Programmes Office (ICPO). This was the only programme surveyed within DHS. Due to restricted information access, only the country breakdown and grant amount per year were made available. PI information is not publicly accessible.

National Institutes of Health

NIH makes all grant statistics publicly available on its official website.⁴ Grant information regarding internationally-based researchers/institutions includes a breakdown of awards by country, type, funding amount, number of grants, and number of individual researchers. As NIH periodically updates information online throughout the year, statistics used within this report are based on data available for FY2009, last updated on 31 July 2010.

² The U.S. fiscal year (FY) begins 1 October of the previous year and ends 30 September of the given year. For example, FY2009 is 1 October 2008 – 30 September 2009.

³ The completed survey can be found in database or catalogue format at <http://www.eusscienceandtechnology.eu/link2us/funding-opportunities.html>.

⁴ NIH grant award recipient information can be found at <http://report.nih.gov/index.aspx>.

Results

DOE, DHS, and NIH all have programmes that are open to EU-based researchers/institutions. Combined, the three entities make available twelve programmes to which EU-based researchers/institutions can directly apply for funding.

Department of Energy

DOE’s overarching mission is to advance the national, economic, and energy security of the U.S., to promote scientific and technological innovation in support of that mission, and to ensure the environmental cleanup of the national nuclear weapons complex. Three funding programmes are open to EU-based researchers/institutions: Office of Science Financial Assistance Programme, Office of Energy Efficiency and Renewable Energy, and Office of Fossil Energy.

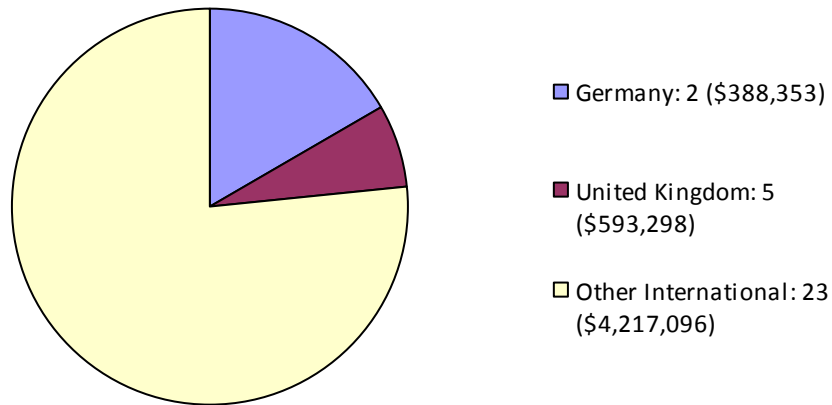


Figure 1.1: DOE FY2009 International Grants by Number of Grants Awarded (Total Funding Amount)

Twenty-three grants, totalling \$5,198,747 USD, were awarded to non U.S.–based institutions in FY2009. EU–based researchers/institutions received seven grants. Figure 1.1 shows the breakdown of EU grants awarded versus those awarded to the other countries internationally. The EU received over a quarter of the international grants, approximately receiving \$981,651 USD or 30% of the total funding of the international grants. The seven grants were awarded to only two EU Member States (MS). The United Kingdom received the most grants, with five, followed by Germany, which received two grants. For further information on specific funding amounts, please see Appendix I.

Department of Homeland Security

DHS's S&T Directorate seeks to improve homeland security by providing state-of-the-art technology. The S&T Directorate's International Cooperative Programmes Office (ICPO) just began its programme targeting international research in 2007. The programme is open to EU-based researchers/institutions.

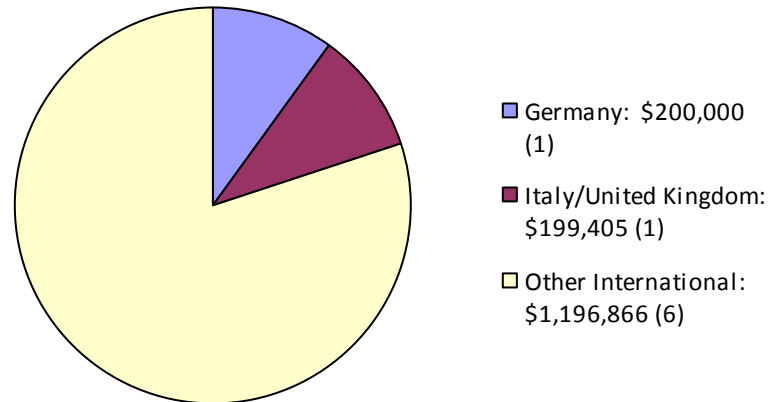


Figure 1.2: DHS ICPO FY2009 Research Grants by Amount Funded
(Number of Awards)

The ICPO awarded eight grants in FY2009. Total funding amounted to \$1,596,271 USD. Of the eight grants awarded, two were given to EU-based researchers/institutions totalling \$399,405 USD. Figure 1.2 compares the funding for the EU versus other international researchers/institutions. Germany received one award while Italy and the United Kingdom shared a second. Both awards were approximately \$200,000 USD each.

National Institutes of Health

NIH is part of the U.S. Department of Health & Human Services (HHS) and is the primary U.S. federal entity for conducting and supporting medical research. In 2008, the then Director of NIH Elias Zerhouni and European Commissioner for Research Janez Potocnik agreed to the mutual openness of NIH funding programmes and the Framework Programme for biomedical and health research.⁵

For FY2009, NIH awarded 50,616 awards to U.S. and internationally based researchers/institutions, totaling \$21,703,918,711 USD. Out of this total, 538 were awarded to internationally-based institutions. EU-based institutions received 24%, or 131, of the international grants totaling \$48,540,408 USD. By funding amount, EU-based institutions received 22% of the total international grants and 0.22% of the overall NIH grants.

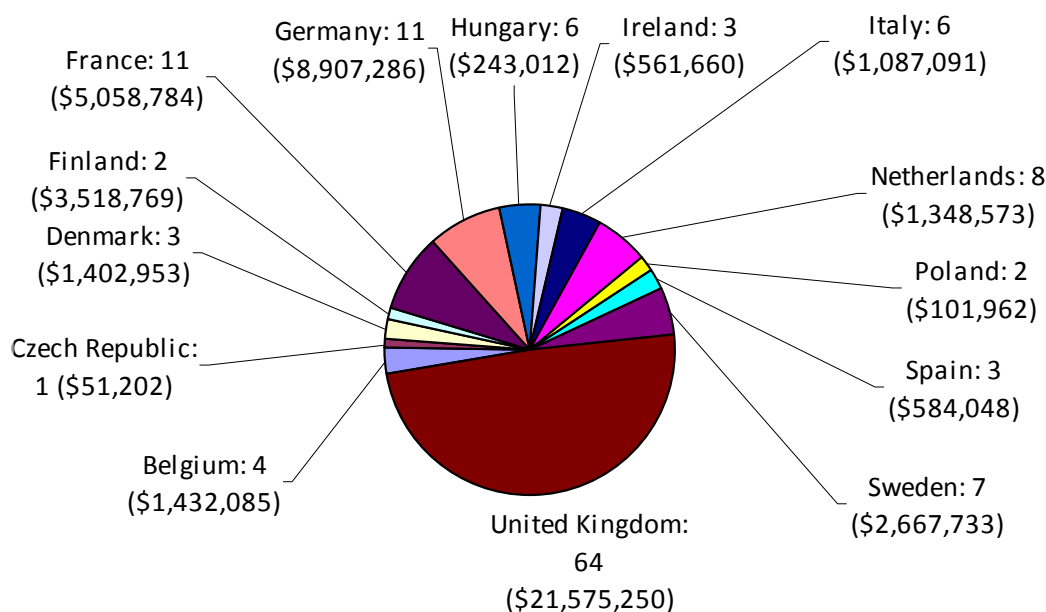


Figure 1.3: NIH FY2009 Awards to MS by Number of Grants Awarded (Total Funding Amount)

Fourteen EU MS received the 131 grants. Figure 1.3 shows the distribution among EU MS. The United Kingdom received the most awards and total grant funding, with almost half of the EU awards totaling \$21,575,250 USD. France and Germany each received eleven awards. Others received fewer than ten awards. For further details regarding the breakdown of funding and awards, please see Appendix III.

⁵ E.A. Zerhouni, J. Potocnik, *Science* **322**; 1048 (2008).

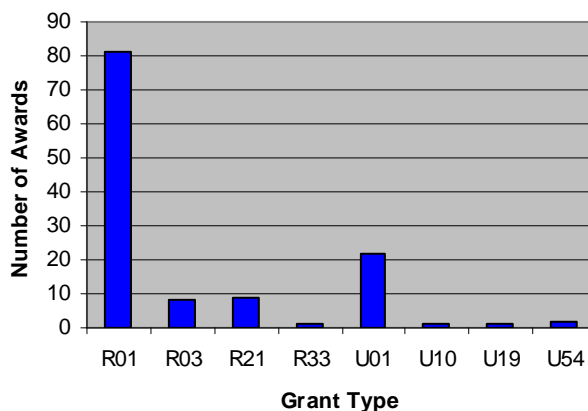


Figure 1.4: NIH EU Award Breakdown by Grant Type

NIH data can be further broken down into the specific type of awards that EU-based researchers/institutions received. Please see Appendix IV for a description of award types. Figure 1.4 shows that the majority of the 131 grants were Research Grant Programme (R01) awards. The Research Project Cooperative Agreement (U01) was the second most used mechanism with 22, or 17%. Other grant mechanisms were used on a significantly smaller scale.

To compare to the EU, the European Research Council (ERC), in the area of life sciences, funded 74 projects worth €164,319,512 EUR from MS (an additional €39,999,460 EUR for 17 projects from association countries to the Framework Programme) in the 2009 Advanced Grant Call.⁶ ERC, a component of the “Ideas Programme” of the EU’s Seventh Research Framework Programme (FP7), supports investigator-driven frontier research in MS and FP7 associated countries. NIH funded 131 projects worth approximately €37,338,775 EUR⁷ from MS in FY2009.

⁶ Further details about the Advanced Grant Call Programme can be found at: erc.europa.eu/indec.cfm?fuseaction=page.display&topicID=66. Data available at: erc.europa.eu/index.cfm?fuseaction=page.display&topicID=518; CORDIS.

⁷ Using 1.3 USD/EUR exchange rate.

Key Findings

Out of the twenty-seven EU MS, fourteen received funding from DOE, DHS, or NIH. On average, 20-30% of the total number of awards given to internationally-based institutions/researchers were awarded to MS, worth \$49,921,464 USD. NIH awarded the highest number of awards and largest total funding. NIH provided by far the largest extramural grant funding of EU-based institutions/researchers, compared to DOE and DHS.

EU-based institutions receiving U.S. funding are led by the United Kingdom, Germany, and France; unsurprisingly given these MS are the largest science investors in the EU (they also lead the ERC grantees)⁸. Out of these fourteen MS receiving funding, the United Kingdom received the highest number of awards, both in total number and from all three agencies, worth \$22,268,250.5 USD⁹. Only one other MS, Germany, received funding from all three entities, worth \$9,495,639 USD. Italy was the only MS to receive funding from two federal entities, DHS and NIH, worth \$1,186,793.5 USD. The ten other states receiving funding, saw funding only from NIH, when combined worth \$16,970,781 USD.

⁸ Data available at: erc.europa.eu/pdf/Statistics_AdG09.pdf.

⁹ Due to a shared award between the United Kingdom and Italy, awarded by the Department of Homeland Security, only half of the total amount was figured into each MS total awarded amount for FY2009.

Appendices

Appendix I: Department of Energy Grant Statistics for FY2009

EU Participation Statistics: Department of Energy (DOE)

Directorate: All Offices

Source: DOE Headquarters Procurement Office

Yearly Aggregate Totals

<u>Fiscal Year</u>	<u>Total Researchers</u>	<u>Total Awards</u>	<u>Total Funding</u>
2009	5*	7	\$981,651

Individual Member State Totals by Year

<u>Member State</u>	<u>Fiscal Year</u>	<u>Total Researchers</u>	<u>Total Awards</u>	<u>Total Funding</u>
Germany	2009	N/A**	2	\$388,353
United Kingdom	2009	5	5	\$593,298
Totals		5	7	\$981,651

*Based on available individual PI data

**Name of PI was unavailable. Only institution was given.

Appendix II: Department of Homeland Security Grant Statistics for FY2009

EU Participation Statistics: Department of Homeland Security (DHS)

Directorate: Science and Technology Directorate, International Cooperative Programmes Office (ICPO)

Source: ICPO Program Manager

Yearly Aggregate Totals

<u>Fiscal Year</u>	<u>Total Researchers</u>	<u>Total Awards</u>	<u>Total Funding</u>
2009	N/A	3	\$399,405

Individual Member State Totals by Year

<u>Member/Associated</u>	<u>Fiscal Year</u>	<u>Total Researchers</u>	<u>Total Awards</u>	<u>Total Funding</u>
Germany	2009	N/A	1	\$200,000
Italy/United Kingdom*	2009	N/A	1	\$199,405
Totals			2	\$399,405

*Shared award

Appendix III: National Institutes of Health Grant Statistics for FY2009

EU Participation Statistics: National Institutes of Health (NIH)

Directorate: All NIH Institutes/Centers
 Source: NIH Research Portfolio Online Reporting Tool (RePORT)

Yearly Aggregate Totals

<u>Fiscal Year</u>	<u>Total Researchers</u>	<u>Total Awards</u>	<u>Total Funding</u>
2009	116	131	\$48,540,408

Individual Member State Totals by Year

Member State	Fiscal Year	Total Researchers	Total Awards	Total Funding	Award*	
					Type	Number
BELGIUM	2009	3	4	\$1,432,085	R01	2
					R21	1
					U10	1
CZECH REPUBLIC	2009	1	1	\$51,202	R01	1
DENMARK	2009	3	3	\$1,402,953	R01	1
					R21	1
					U19	1
FINLAND	2009	2	2	\$3,518,769	U01	1
FRANCE	2009	10	11	\$5,058,784	R01	6
					R03	1
					U01	4
GERMANY	2009	11	11	\$8,907,286	R01	5
					R03	1
					R21	1
					U01	3
HUNGARY	2009	6	6	\$243,012	R01	3
					R03	3
IRELAND	2009	3	3	\$561,660	R01	3
ITALY	2009	6	6	\$1,087,091	R01	5
					U01	1
NETHERLANDS	2009	7	8	\$1,348,573	R01	4
					R21	1
					U01	3
POLAND	2009	2	2	\$101,962	R01	2
SPAIN	2009	3	3	\$584,048	R01	3
SWEDEN	2009	7	7	\$2,667,733	R21	1
					U01	1
UNITED KINGDOM	2009	52	64	\$21,575,250	R01	46
					R03	3
					R21	4
					R33	1
					U01	8
					U54	2
Totals		116	131	\$48,540,408		

*See Appendix III: NIH Programme Type Breakdown for full award name

Appendix IV: National Institutes of Health Programme Type Breakdown

National Institutes of Health (NIH) Programme Type Breakdown

Directorate: All NIH Institutes/Centers

Source: NIH Research Portfolio Online Reporting Tool (RePORT)

Programme Name	Acronym
NIH Research Grant Programme	R01
NIH Small Grant Programme	R03
NIH Support for Conference and Scientific Meetings	R13/U13
NIH Exploratory/Developmental Research Grant Award	R21
Exploratory/Developmental Grants Phase II	R33
NIH Clinical Trial Planning Grant Programme	R34
Research Project Cooperative Agreement	U01
Cooperative Clinical Research	U10
Specialised Center Cooperative Agreement	U54