

**National Science Foundation–  
National Institutes of Health  
Survey of Postdoctorates  
at Federally Funded  
Research and Development Centers**

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Final Report**

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## 1. GENERAL NOTES

Federally Funded Research and Development Centers (FFRDCs) are organizations that perform research and development and “are exclusively or substantially financed by the federal government and are supported by the federal government either to meet a particular R&D objective or, in some instances, to provide major facilities at universities for research and associated training purposes. Each center is administered by an industrial firm, a university, or another nonprofit institution” (NSF/SRS 2006, p. 323). Many FFRDCs employ postdoctoral researchers (postdocs) as part of their efforts to assist government agencies with scientific research and analysis and to train the country’s researchers and scientists.

The 2009 FFRDC survey collected the total number of postdocs employed by FFRDCs in the United States—categorized by source of support, citizenship, sex, and field of research—as of October 1, 2009. The FFRDC survey is collected as part of the Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS), which is sponsored by the National Science Foundation (NSF) and the National Institutes of Health (NIH). Funding for the FFRDC survey is provided in part by the U.S. Department of Energy.

## 2. TECHNICAL NOTES

### Survey Universe

The universe for the 2009 GSS-FFRDC survey was the Master Government List of Federally Funded Research and Development Centers (available at <http://www.nsf.gov/statistics/ffrdclist/start.cfm>). This list of FFRDCs has been kept by NSF since 1967. The master list of FFRDCs, as of April 2009, appears in appendix A. The survey universe, as of April 2009, consisted of 39 FFRDCs. Of these 39 FFRDCs, any that either currently had or could have a postdoc program was eligible to participate in the survey.

The 2009 survey also contacted the NIH’s Intramural Research Program because it employs the largest number of postdocs in the federal government. NIH is also a cosponsor of the GSS. However, because, NIH Intramurals is not an FFRDC, its data are reported separately from the data of the 39 FFRDCs.

## Survey Instruments

The 2009 FFRDC survey collected data on the total number of postdocs employed by each center. A postdoc is defined by the GSS as an appointee who holds a PhD or equivalent doctorate; whose doctorate was awarded recently, generally within the past 5 years; whose appointment is for a limited term, generally no more than 5 to 7 years; who works under the supervision of a senior researcher; and whose appointment is primarily for the purpose of training in research or scholarship. The GSS definition of postdocs was provided in the survey glossary.<sup>1</sup>

The FFRDC survey collected data via a web instrument. Topics included the type of support the postdocs received (federal and nonfederal), their sex, citizenship, race/ethnicity, and field of research. A copy of the survey questionnaire is included in appendix B.

## Survey Methodology

On January 19, 2010, before starting data collection, RTI International (a trade name of Research Triangle Institute, Research Triangle Park, NC) contacted the directors of all 39 FFRDCs to confirm whether the individuals listed as respondents for previous data collections were still at their center and to determine whether these individuals would still be the most appropriate survey respondents or to obtain a respondent name when it was missing. Copies of these letters and all other communication with the FFRDCs are included in appendix C. Of the 39 directors who were asked to confirm a contact name, 33 had not replied after 1 week, when follow-up procedures began. RTI then e-mailed the respondent identified in 2007 to confirm whether the individual would be the respondent again. As necessary, RTI sent follow-up e-mail messages and made follow-up telephone calls to the directors or prior year respondents of the 33 FFRDCs that did not confirm the respondent. As a result of these efforts, a respondent was identified for the 39 contacted FFRDCs.

The survey instrument was e-mailed to all 39 FFRDCs as soon as a respondent was identified for the center. During the data collection process, 16 centers indicated that they did not have postdocs. The list of centers that said they had no postdocs was compared with past data, and RTI confirmed that those 16 FFRDCs

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<sup>1</sup> As part of the survey, FFRDCs were also asked about their own requirements for postdocs (see table 4).

reported having no postdocs in past survey cycles or had been created since the most recent data collection year. Later in the data collection, these FFRDCs were sent an e-mail message asking them to consider whether they might have postdocs working at their center under the title of “postdoctoral fellow,” “postdoctoral researcher,” or “research associate.” Each of the 16 centers responded via e-mail or during a telephone follow-up and confirmed that they had no employees that met the definition of a postdoc working at their FFRDC. In all, 16 FFRDCs were ineligible; these are identified in appendix D. Table 1 lists the 39 FFRDCs that were contacted in the 2009 FFRDC survey, grouped by their administration type. The largest percentage of postdocs (42%) worked in university-administered FFRDCs, 36% worked in industry-administered FFRDCs, and 23% worked in nonprofit-administered FFRDCs.

The FFRDCs were informed in the cover letter that the survey was due on March 1, 2010. A series of follow-up communications with FFRDCs that had yet to respond began before the due date and continued until the final survey was returned on March 30, 2010. These follow-ups included both e-mails and telephone calls to the identified respondent. The schedule for the survey launch and follow-up communications is shown in table 2.

### **3. RESPONSE RATE CALCULATIONS**

All 23 FFRDCs with postdocs responded to the survey. Four FFRDCs provided partial data: the National Cancer Institute at Frederick, Idaho National Laboratory, Jet Propulsion Laboratory, and Lawrence Berkeley National Laboratory did not report postdoc data by one or more of the categories of sex, citizenship, race/ethnicity, source of support, or field of research. (Please see section 4 for the specific categories that each of these FFRDCs was unable to report.) Using the American Association for Public Opinion Research (AAPOR) Response Rate 6 calculation, which counts partials as responses and is used when there are no cases with unknown eligibility, the response rate for the FFRDC data collection was 100%.

The FFRDC response rate by week is shown in table 3.

According to the standard definition issued by AAPOR, Response Rate 6 is calculated using the following equation (AAPOR 2008):

$$RR6 = \frac{(I + P)}{(I + P) + (R + NC + O)}$$

where

$RR$  = response rate

$I$  = complete interview

$P$  = partial interview

$R$  = refusal and break-off

$NC$  = noncontact

$O$  = other

For this data collection, the response rate calculation is as follows:

$$RR2 = \frac{(21 + 1)}{(21 + 1) + (0 + 0 + 0)} = 100\%$$

TABLE 1. Postdoctorates at federally funded research and development centers: 2009

Institution	Sponsoring agency	Total postdoctorates
All FFRDCs		2,449
University-administered FFRDCs		1,022
Ames Laboratory	Department of Energy	44
Argonne National Laboratory	Department of Energy	189
Fermi National Accelerator Laboratory	Department of Energy	56
Jet Propulsion Laboratory	National Aeronautics and Space Administration	132
Lawrence Berkeley National Laboratory	Department of Energy	451
Lincoln Laboratory	DOD, Department of the Air Force	0
National Astronomy and Ionosphere Center	National Science Foundation	4
National Center for Atmospheric Research	National Science Foundation	24
National Optical Astronomy Observatory	National Science Foundation	10
National Radio Astronomy Observatory	National Science Foundation	14
Princeton Plasma Physics Laboratory	Department of Energy	7
SLAC National Accelerator Laboratory	Department of Energy	54
Software Engineering Institute	DOD, Department of the Army	0
Thomas Jefferson National Accelerator Facility	Department of Energy	37
Nonprofit-administered FFRDCs		557
Aerospace Federally Funded R&D Center	DOD, Department of the Air Force	1
Arroyo Center	DOD, Department of the Army	0
Brookhaven National Laboratory	Department of Energy	162
C3I Federally Funded R&D Center	DOD, Office of the Secretary of Defense	0
Center for Advanced Aviation System Development	DOT, Federal Aviation Administration	0
Center for Enterprise Modernization	DOD, Department of the Treasury and Department of Veterans Affairs, IRS	0
Center for Naval Analyses	DOD, Department of the Navy	0
Center for Nuclear Waste Regulatory Analyses	Nuclear Regulatory Commission	0
Centers for Communication and Computing	DOD, National Security Agency	0
Homeland Security Studies and Analysis Institute	DHS, Under Secretary for Science and Technology	0
Homeland Security Systems Engineering and Development Institute	DHS, Under Secretary for Science and Technology	0
National Biodefense Analysis and Countermeasures Center	DHS, Under Secretary for Science and Technology	0
National Defense Research Institute	DOD, Office of the Secretary of Defense	0
National Renewable Energy Laboratory	Department of Energy	95
Oak Ridge National Laboratory	Department of Energy	170
Pacific Northwest National Laboratory	Department of Energy	129
Project Air Force	DOD, Department of the Air Force	0
Science and Technology Policy Institute	National Science Foundation	0
Studies and Analyses Center	DOD, Office of the Secretary of Defense	0
Industry-administered FFRDCs		870
Idaho National Laboratory	Department of Energy	10
Lawrence Livermore National Laboratory <sup>a</sup>	Department of Energy	110
Los Alamos National Laboratory	Department of Energy	337
National Cancer Institute at Frederick	HHS, National Institutes of Health	247
Sandia National Laboratories	Department of Energy	152
Savannah River National Laboratory	Department of Energy	14

NOTE: DHS = Department of Homeland Security; DOD = Department of Defense; DOT = Department of Transportation; FFRDC = federally funded research and development center; HHS = Department of Health and Human Services; IRS = Internal Revenue Service. DOD, DHS and DOT sponsored FFRDCs do not employ any postdocs. DOE, NASA, NSF and NHS FFRDCs all employ postdocs.

<sup>a</sup> Lawrence Livermore National Laboratory became industry-administered in October 2007. Previously, it was university-administered.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

TABLE 2. Survey launch and follow-up communications schedule

Date	Type of communication
January 19, 2010	Director contact letter
January 26–29, 2010	Telephone calls to confirm respondent contact information if not yet received
February 1, 2010	Survey launch via e-mail with login information
February 18, 2010	First nonresponder e-mail prompt (for cases at "no activity")
February 23, 2010	First nonresponder e-mail prompt (for cases at "logged in")
February 24–25, 2010	Telephone calls to confirm e-mail receipt for "no activity" cases
March 1, 2010	Second nonresponder e-mail prompt (for all incomplete cases)
March 15, 2010	Third nonresponder e-mail prompt (for all incomplete cases)
March 15, 2010	E-mail to confirm "0" postdoc status for FFRDCs who reported no postdocs via e-mail or telephone
March 30, 2010	Survey closed upon receipt of final survey

FFRDC = federally funded research and development center.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

TABLE 3. Cumulative response rates, by week

Weeks after survey login e-mailed (February 1, 2010)	Response, by week		Cumulative response rate	
	Responded	Response rate (%)	Total	Response rate (%)
1	2	8.7	2	8.7
2	0	0	2	8.7
3	4	17	6	26
4	8	35	14	60.9
5	5	22	19	82.6
6	1	4.3	20	87
7	1	4.3	21	91.3
8	1	4.3	22	95.7
9 (final)	1	4.3	23	100

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

#### 4. EDITING AND MISSING DATA PROCEDURES

As each FFRDC returned data, RTI staff reviewed the submission to confirm that all data fields were completed and that data were internally consistent. In cases where additional information or corrections were needed, respondents were contacted by telephone or e-mail and asked to correct and resubmit the survey.

RTI conducted a comprehensive review of 12 FFRDCs that were flagged for edit verification. If an FFRDC had cell counts that were more than 20% above or 20% below their prior year data, that center was flagged for edit verification. In all cases, respondents confirmed their data as accurate, with changes usually explained by factors such as a hiring freeze or changes in the FFRDCs' internal tracking systems for administrative data.

In some cases, FFRDCs checked a box on the survey to indicate they could not provide postdoc data broken out by specific categories. Idaho National Laboratory could not provide counts of postdocs by race/ethnicity, sex, citizenship, source of support, or field of research. The National Cancer Institute at

Frederick could not provide postdoc data by race/ethnicity, field of research, or citizenship by sex. Jet Propulsion Laboratory could not provide postdoc data by field of research. Lawrence Berkeley National Laboratory could not provide source of support broken out by citizenship.

## **5. RESULTS AND DISCUSSION**

Data were collected on FFRDC postdoc definitional requirements and are displayed in table 4. Data on the number of postdocs by source of support, citizenship, sex, and field of research are displayed in tables 5 through 11; please note that data were not provided for all items by all FFRDCs. Based on other NSF work, NIH Intramural Research Programs were found to employ the largest number of postdocs in the federal government. The FFRDC survey is a first step in collecting information on postdocs employed in federal agencies. Data for NIH Intramural Research Programs are provided in tables 12 through 14, although they are not an FFRDC. Appendix E provides trend data from 2004 through 2007 and 2009; data were not collected in 2008.

### **Postdoctoral Requirements**

The 2009 survey added several items to the FFRDC survey. The first of these was an item asking FFRDCs whether they had a formal definition of postdocs and what requirements the FFRDC had for postdoc positions. Over three-quarters (18) of the FFRDCs reported having a formal definition of a postdoc (table 4). All FFRDCs required that the postdoc have a doctoral degree or equivalent and defined the position as one intended to advance professional skills and lasting for a defined period of time. The least common postdoc requirement was that postdocs publish research in scholarly journals, with only 13 FFRDCs, or 56%, indicating they had this requirement.

### **Race/Ethnicity**

New to the survey in 2009 was an item requesting data on race/ethnicity for postdocs who were U.S. citizens or permanent residents (non-U.S. citizens with green cards). Race/ethnicity data were reported for 92%

of postdocs. Two FFRDCs, Idaho National Laboratory and the National Cancer Institute at Frederick, did not report race/ethnicity for their combined total of 257 postdocs. Of the 899 postdocs for whom race/ethnicity data were reported, only 3% were reported as unknown (table 5).

TABLE 4. Federally funded research and development center postdoctoral requirements: 2009

Elements of postdoc definition	Number of FFRDCs
All FFRDCs	23
FFRDC has a formal definition of postdoc position	
Yes	18
No	5
Postdoc requirements	
PhD or equivalent degree (e.g., ScD, MD, DVM, DDS)	23
Publication of research in scholarly journals	13
Postdoc must work under the direction of a senior scholar	18
Doctorate was recently awarded	19
Mentorship for professional development	20
Position is temporary	20
Full-time commitment to research	21
Prepare the postdoc for an independent career in research	21
Position intended to provide training in research	22
Position intended to advance professional skills	23
Position is for a defined period of time (i.e., has a term limit)	23

FFRDC = federally funded research and development center.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

TABLE 5. Postdoctorates, by ethnicity and race, for U.S. citizens and permanent residents (non-U.S. citizens with green cards): 2009

FFRDC	All postdoctorates	Ethnicity		Race						Ethnicity/race unknown or not stated
		Hispanic/Latino (one or more races)	Non-Hispanic/Latino (one or more races)	American Indian/Alaska Native	Asian	Black	Native Hawaiian/Other Pacific Islander	White	More than one race	
All FFRDCs	979	39	860	2	115	18	2	691	5	27
Aerospace Federally Funded R&D Center	1	0	1	0	0	0	0	1	0	0
Ames Laboratory	6	0	6	0	0	1	0	5	0	0
Argonne National Laboratory	46	2	44	0	1	1	0	42	0	0
Brookhaven National Laboratory	40	2	38	0	3	2	0	33	0	0
Fermi National Accelerator Laboratory	21	1	20	0	2	0	1	17	0	0
Idaho National Laboratory	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jet Propulsion Laboratory	45	1	44	0	7	1	0	35	1	0
Lawrence Berkeley National Laboratory	157	6	151	1	34	3	0	92	4	17
Lawrence Livermore National Laboratory	80	4	76	0	12	2	0	56	0	6
Los Alamos National Laboratory	185	8	177	0	34	1	0	142	0	0
National Astronomy and Ionosphere Center	1	0	1	0	0	0	0	1	0	0
National Cancer Institute at Frederick	80	NA	NA	NA	NA	NA	NA	NA	NA	NA
National Center for Atmospheric Research	12	0	12	0	0	0	0	12	0	0
National Optical Astronomy Observatory	8	0	8	0	1	0	0	7	0	0
National Radio Astronomy Observatory	4	0	4	0	0	0	0	4	0	0
National Renewable Energy Laboratory	49	2	47	0	2	0	0	45	0	0
Oak Ridge National Laboratory	47	1	46	0	1	3	0	42	0	0
Pacific Northwest National Laboratory	56	1	55	1	6	2	0	46	0	0
Princeton Plasma Physics Laboratory	4	0	4	0	0	1	0	3	0	0
Sandia National Laboratories	95	8	87	0	7	1	1	78	0	0
Savannah River National Laboratory	14	3	11	0	2	0	0	9	0	0
SLAC National Accelerator Laboratory	14	0	14	0	2	0	0	12	0	0
Thomas Jefferson National Accelerator Facility	14	0	14	0	1	0	0	9	0	4

NA = not available.

FFRDC = federally funded research and development center.

NOTE: Data by ethnicity and race were not provided by all FFRDCs; details may not sum to total. Table includes U.S. citizens and permanent residents only.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

## Source of Support

Primary source of support was reported for 99% of postdocs (table 6). Source of support was reported for 84% of postdocs who were U.S. citizens and permanent residents and for 80% of postdocs who were temporary visa holders. Citizenship data were reported for 84% of postdocs who were federally supported but for only 52% of postdocs who were not federally supported.

TABLE 6. Postdoctorates at federally funded research and development centers, by source of support, sex, and citizenship: 2009

Source of support and sex	All postdoctorates	Citizenship	
		U.S. citizens and permanent residents	Temporary visa holders
All postdoctorates	2,449	979	1,460
Federal support	2,258	770	1,124
Nonfederal support	181	52	42
Postdoctorates reporting sex			
Male	1,679	663	1,016
Female	513	236	277

NOTE: Data by sex and citizenship were not provided by all federally funded research and development centers; details may not sum to total.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

The vast majority of postdocs (92%) were primarily supported by federal funds. Only one FFRDC (Aerospace Federally Funded R&D Center) reported having no postdocs who were receiving federal support (table 7), but that FFRDC employed just one postdoc during the reporting period. Among federally funded postdocs for whom data were reported, slightly more than half (59%) of federal support was received by temporary visa holders, with much higher percentages found at Argonne National Laboratory (76%), Brookhaven National Laboratory (75%), and Oak Ridge Laboratory (72%) (table 8). Among nonfederally funded postdocs for whom data were reported, slightly more than half (55%) were U.S. citizens. Only Thomas Jefferson National Acceleratory Facility reported having more postdocs who were nonfederally supported than were federally supported (table 8).

TABLE 7. Postdoctorates at federally funded research and development centers, by citizenship, source of support, and sex: 2009

FFRDC	All postdoctorates	Citizenship		Source of support		Sex	
		U.S. citizens and permanent residents	Temporary visa holders	Federal	Nonfederal	Male	Female
All FFRDCs	2,449	979	1,460	2,258	181	1,679	513
Aerospace Federally Funded R&D Center	1	1	0	0	1	1	0
Ames Laboratory	44	6	38	44	0	34	10
Argonne National Laboratory	189	46	143	189	0	142	47
Brookhaven National Laboratory	162	40	122	162	0	126	36
Fermi National Accelerator Laboratory	56	21	35	56	0	45	11
Idaho National Laboratory	10	NA	NA	NA	NA	NA	NA
Jet Propulsion Laboratory	132	45	87	132	0	100	32
Lawrence Berkeley National Laboratory	451	157	294	364	87	320	131
Lawrence Livermore National Laboratory	110	80	30	110	0	79	31
Los Alamos National Laboratory	337	185	152	280	57	268	69
National Astronomy and Ionosphere Center	4	1	3	4	0	2	2
National Cancer Institute at Frederick	247	80	167	247	0	NA	NA
National Center for Atmospheric Research	24	12	12	22	2	17	7
National Optical Astronomy Observatory	10	8	2	9	1	10	0
National Radio Astronomy Observatory	14	4	10	13	1	9	5
National Renewable Energy Laboratory	95	49	46	94	1	70	25
Oak Ridge National Laboratory	170	47	123	169	1	142	28
Pacific Northwest National Laboratory	129	56	73	129	0	102	27
Princeton Plasma Physics Laboratory	7	4	3	7	0	6	1
Sandia National Laboratories	152	95	57	146	6	125	27
Savannah River National Laboratory	14	14	0	14	0	9	5
SLAC National Accelerator Laboratory	54	14	40	54	0	42	12
Thomas Jefferson National Accelerator Facility	37	14	23	13	24	30	7

NA = not available.

FFRDC = federally funded research and development center.

NOTE: Data by citizenship, support, and sex were not provided by all FFRDCs; details may not sum to total.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

TABLE 8. Postdoctorates at federally funded research and development centers, by source of support and citizenship: 2009

FFRDC	All postdoctorates	Source of support					
		Federal			Nonfederal		
		Total federal	U.S. citizens and permanent residents	Temporary visa holders	Total nonfederal	U.S. citizens and permanent residents	Temporary visa holders
All FFRDCs	2,449	2,258	770	1,124	181	52	42
Aerospace Federally Funded R&D Center	1	0	0	0	1	1	0
Ames Laboratory	44	44	6	38	0	0	0
Argonne National Laboratory	189	189	46	143	0	0	0
Brookhaven National Laboratory	162	162	40	122	0	0	0
Fermi National Accelerator Laboratory	56	56	21	35	0	0	0
Idaho National Laboratory	10	NA	NA	NA	NA	NA	NA
Jet Propulsion Laboratory	132	132	45	87	0	0	0
Lawrence Berkeley National Laboratory	451	364	NA	NA	87	NA	NA
Lawrence Livermore National Laboratory	110	110	80	30	0	0	0
Los Alamos National Laboratory	337	280	152	128	57	33	24
National Astronomy and Ionosphere Center	4	4	1	3	0	0	0
National Cancer Institute at Frederick	247	247	80	167	0	0	0
National Center for Atmospheric Research	24	22	12	10	2	0	2
National Optical Astronomy Observatory	10	9	8	1	1	0	1
National Radio Astronomy Observatory	14	13	4	9	1	0	1
National Renewable Energy Laboratory	95	94	48	46	1	1	0
Oak Ridge National Laboratory	170	169	47	122	1	0	1
Pacific Northwest National Laboratory	129	129	56	73	0	0	0
Princeton Plasma Physics Laboratory	7	7	4	3	0	0	0
Sandia National Laboratories	152	146	91	55	6	4	2
Savannah River National Laboratory	14	14	14	0	0	0	0
SLAC National Accelerator Laboratory	54	54	14	40	0	0	0
Thomas Jefferson National Accelerator Facility	37	13	1	12	24	13	11

NA = not available.

FFRDC = federally funded research and development center.

NOTE: Data by support and citizenship were not provided by all FFRDCs; details may not sum to total.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

## Citizenship

Citizenship data were among the best-reported items on the survey, with information provided for 99% of postdocs. Only Idaho National Laboratory was unable to provide the data. Postdocs with temporary visas made up 60% of the total number of postdocs (table 6). Postdocs who were U.S. citizens outnumbered postdocs who held temporary visas by 10 or more at just a handful of FFRDCs, including Lawrence Livermore National Laboratory, Los Alamos National Laboratory, and Sandia National Laboratories (table 7).

Support by citizenship was less well reported, with support data provided for 84% of U.S. citizens and 80% of temporary visa holders. Of those postdocs for whom support data were available, 94% who were U.S. citizens and 96% who held temporary visas were federally supported (table 6). Just over half (55%) of nonfederally supported postdocs were U.S. citizens.

## Sex

Sex data were reported for 90% of all postdocs, with 77% of those being male (table 6). Of the centers reporting more than five postdocs, the following had the highest proportion of female postdocs: Savannah River National Laboratory (36%), National Radio Astronomy Observatory (36%), National Center for Atmospheric Research (29%), Lawrence Berkeley National Laboratory (29%), Lawrence Livermore National Laboratory (28%), and National Renewable Energy Laboratory (26%) (table 7). Approximately 61% of male postdocs and 54% of female postdocs were temporary visa holders (table 9).

Sex information was reported for 92% of postdocs who were U.S. citizens and 89% of postdocs who held temporary visas (table 6). Of those postdocs for whom sex data were reported, only 21% of those who held temporary visas and 26% of those who were U.S. citizens were female (table 6).

TABLE 9. Postdoctorates at federally funded research and development centers, by sex and citizenship: 2009

FFRDC	All postdoctorates	Sex					
		Male			Female		
		Total male	U.S. citizens and permanent residents	Temporary visa holders	Total female	U.S. citizens and permanent residents	Temporary visa holders
All FFRDCs	2,449	1,679	663	1,016	513	236	277
Aerospace Federally Funded R&D Center	1	1	1	0	0	0	0
Ames Laboratory	44	34	6	28	10	0	10
Argonne National Laboratory	189	142	26	116	47	20	27
Brookhaven National Laboratory	162	126	26	100	36	14	22
Fermi National Accelerator Laboratory	56	45	19	26	11	2	9
Idaho National Laboratory	10	NA	NA	NA	NA	NA	NA
Jet Propulsion Laboratory	132	100	32	68	32	13	19
Lawrence Berkeley National Laboratory	451	320	106	214	131	51	80
Lawrence Livermore National Laboratory	110	79	58	21	31	22	9
Los Alamos National Laboratory	337	268	138	130	69	47	22
National Astronomy and Ionosphere Center	4	2	1	1	2	0	2
National Cancer Institute at Frederick	247	NA	NA	NA	NA	NA	NA
National Center for Atmospheric Research	24	17	7	10	7	5	2
National Optical Astronomy Observatory	10	10	8	2	0	0	0
National Radio Astronomy Observatory	14	9	2	7	5	2	3
National Renewable Energy Laboratory	95	70	36	34	25	13	12
Oak Ridge National Laboratory	170	142	39	103	28	8	20
Pacific Northwest National Laboratory	129	102	41	61	27	15	12
Princeton Plasma Physics Laboratory	7	6	4	2	1	0	1
Sandia National Laboratories	152	125	82	43	27	13	14
Savannah River National Laboratory	14	9	9	0	5	5	0
SLAC National Accelerator Laboratory	54	42	11	31	12	3	9
Thomas Jefferson National Accelerator Facility	37	30	11	19	7	3	4

NA = not available.

FFRDC = federally funded research and development center.

NOTE: Data by sex were not provided by all FFRDCs; details may not sum to total.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

## Field of Research

The 2009 FFRDC survey added questions about postdoc field of research. This information was reported by FFRDCs for 84% of postdocs. Science fields accounted for 73% of postdocs at FFRDCs reporting field of research (table 10). Engineering fields accounted for 20%, while about 7% of postdocs were in multidisciplinary fields or unknown fields of research. Physics/astronomy postdocs accounted for 45% of those in science fields, followed by 23% in chemistry. Materials/metallurgical engineering was the most commonly reported engineering field (36%), followed by 17% each in mechanical engineering and chemical engineering.

Citizenship by field of research information was provided for 84% of postdocs. Of those, 72% of postdocs who were U.S. citizens and 74% of postdocs who held temporary visas were in the sciences. Of those postdocs in science fields, 59% were postdocs with temporary visas. Of those postdocs in engineering fields, 57% were postdocs with temporary visas.

TABLE 10. Postdoctorates, by specific field of research and citizenship: 2009

Field of research	Total	Citizenship	
		U.S. citizens and permanent residents	Temporary visa holders
All FFRDCs	2,449	854	1,206
Science	1,502	614	888
Earth, atmospheric, and ocean sciences	101	55	46
Mathematical sciences	34	19	15
Computer sciences	83	34	49
Biological sciences	193	79	114
Health fields	10	5	5
Agricultural sciences	2	1	1
Psychology	1	1	0
Social sciences	2	1	1
Physics/astronomy	672	240	432
Chemistry	352	161	191
Other science	52	18	34
Engineering	410	177	233
Aerospace engineering	4	2	2
Agricultural engineering	0	0	0
Biomedical engineering	8	5	3
Chemical engineering	68	28	40
Civil engineering	7	1	6
Electrical engineering	56	25	31
Engineering science and physics	2	0	2
Industrial/manufacturing engineering	2	1	1
Materials/metallurgical engineering	146	54	92
Mechanical engineering	70	38	32
Mining engineering	0	0	0
Nuclear engineering	28	11	17
Petroleum engineering	0	0	0
Other engineering	19	12	7
Multidisciplinary	131	57	74
Non-science/non-engineering	0	0	0
Field of research not known	17	6	11

FFRDC = federally funded research and development center.

NOTE: Data by field of research and citizenship were not provided by all FFRDCs; details may not sum to total.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

TABLE 11. Postdoctorates, by type of federally funded research and development center, by administration type, citizenship, and sex: 2009

	Citizenship			Sex	
	Total	U.S. citizens and permanent residents	Temporary visa holders	Male	Female
All FFRDCs	2,449	979	1,460	1,679	513
University-administered FFRDCs	1,022	332	690	757	265
Nonprofit-administered FFRDCs	557	193	364	441	116
Industry-administered FFRDCs	870	374	239	481	132

FFRDC = federally funded research and development center.

NOTE: Data by citizenship and sex were not provided by all FFRDCs; details may not sum to total.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

## FFRDC Administration Type

Administration type was information collected from the Master Government List of Federally Funded Research and Development Centers (available at <http://www.nsf.gov/statistics/ffrdclist/start.cfm>), maintained by NSF since 1967. As noted in section 2 above, university-administered FFRDCs employed the greatest percentage of postdocs (42%), with 36% reported to be in industry-administered FFRDCs, and 23% reported to

be in nonprofit-administered FFRDCs (table 11). Citizenship and sex information was provided for only 70% of postdocs at industry-administered FFRDCs, as opposed to 100% of postdocs at university- and nonprofit-administered FFRDCs. Temporary visa holders made up about two-thirds of the postdocs at both university-administered and nonprofit-administered FFRDCs, while U.S. citizens outnumbered temporary visa holders at industry-administered FFRDCs with 61% of the postdocs. University-administered FFRDCs reported that their postdocs were 74% male, while 79% of postdocs at nonprofit-administered FFRDCs were male, and 78% of postdocs at industry-administered FFRDCs were male.

## **NIH Intramural Research Program Findings**

The NIH Intramural Research Program reported employing the largest number of postdocs in 2009, with a total of 3,635 postdocs versus the single largest FFRDC, Lawrence Berkeley National Laboratory, which reported 451. Reporting by item was low or nonexistent for some of the items asked. Data by sex were provided for only about half (53%) of the postdocs. Race/ethnicity and field of research were not reported for any of the postdocs. The findings specific to NIH Intramurals are found in tables 12 and 13:

- **Postdoctoral requirements.** NIH Intramurals reported having a formal definition of postdocs; as with most FFRDCs, they had all the requirements listed in table 4.
- **Source of support.** This information was provided for all NIH Intramurals postdocs. Close to 98% of postdocs were federally supported, with a slightly higher percent (99%) among U.S. citizens and a slightly lower percent (96%) among temporary visa holders (table 12).
- **Citizenship.** Citizenship information was reported for all NIH Intramurals postdocs. Approximately 41% of postdocs were U.S. citizens (table 12). Nearly all postdocs who were U.S. citizens were federally supported (99%), and 96% of postdocs who held temporary visas were federally supported (table 13).
- **Sex.** Sex was reported for only about half, or 1,921 of the 3,635, of postdocs in the NIH Intramurals (table 12). It should be noted, however, that those 1,921 postdocs represented data from 17 of the 23 NIH Intramurals programs. For those NIH Intramurals postdocs for whom sex data were available, there were more males than females (1,107 males; 814 females). The percentage of postdocs who were female (42%) was higher than it was at FFRDCs (23% female postdocs).

TABLE 12. Postdoctorates at National Institutes of Health Intramural Research Programs, by source of support, sex, and citizenship: 2009

Source of support and sex	All postdoctorates	Citizenship	
		U.S. citizens and permanent residents	Temporary visa holders
All postdoctorates	3,635	1,493	2,142
Federal support	3,550	1,491	2,059
Nonfederal support	85	2	83
Postdoctorates reporting sex			
Total	1,921	723	1,198
Male	1,107	370	737
Female	814	353	461

NOTE: Data were not provided for all National Institutes of Health Research Programs; details may not sum to total.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

TABLE 13. Postdoctorates at National Institutes of Health Intramural Research Programs, by source of support and citizenship: 2009

Program	All postdoctorates	Source of support					
		Federal			Nonfederal		
		Total federal	U.S. citizens and permanent residents	Temporary visa holders	Total nonfederal	U.S. citizens and permanent residents	Temporary visa holders
National Institutes of Health Intramural Research Programs	3,635	3,548	1,506	2,042	85	2	83

NOTE: Data were not provided for all National Institutes of Health Research Programs; details may not sum to total.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

## 6. DEBRIEFINGS

In order to collect information on how well FFRDCs were able to use the web instrument that was new to the 2009 survey and to determine what types of information might be collected from FFRDCs in future surveys, a small number of debriefing interviews were conducted. Debriefings of approximately 15 minutes were completed over the telephone about 6 weeks after respondents had completed the survey. Respondents had the web instrument available to view during the debriefings. Ames Laboratory, the National Optical Astronomy Observatory, and SLAC National Accelerator Laboratory participated.

Overall, FFRDCs found the web instrument to be an improvement over the worksheet approach used in prior years. The FFRDCs found the items easy to navigate, with clear instructions and well-defined purpose.

The main findings from the debriefing are summarized as follows:

- **Background information.** Debriefing participants had been at their respective institutions for between 9 and 22 years, and each had responded to the FFRDC survey in the past. All three FFRDCs reported they were able to include all postdocs. Two of the FFRDCs relied on job titles assigned at hiring by human resources to identify their postdocs; the third FFRDC relied on administrative staff in the various directorates to identify the postdocs, but he was confident they used a common definition and that all had been included.

- Survey information/instructions. All participants reported they had read the instructions page, found it clear and helpful, but did not need to refer to it again during the survey. All were familiar with the term “FFRDC.”
- Postdoc definition. None of the participants reported any difficulty responding to this item, and none were able to think of a component of their definition of postdoc that was not included in the list of elements provided. All three FFRDCs indicated it would be helpful if NSF provided its definition of postdoc just so they could be certain there was a common understanding of who should be included.
- Demographics. All three FFRDCs reported tracking race/ethnicity information in their systems and that they used the same categories internally as were used on the survey. All three FFRDCs indicated they were able to report this information for all of their postdocs.
- Financial support by citizenship. All three FFRDCs reported having this information readily available for all their postdocs. These FFRDCs each used internal charge codes to determine how each postdoc was being supported. One participant had wondered whether “nonfederal” meant “non-NSF” or meant she should include only postdocs who received no type of federal support. Each indicated they could report the specific federal agencies providing support.
- Field of research by citizenship. Field of research information was determined slightly differently among the three FFRDCs debriefed. One reported using the field in which postdocs had obtained their degree. Another reported basing field of research on the area in which the postdoc was currently working. The third reported needing to rely on staff in the individual directorates to report back field of research for their postdocs, so it is not certain how each of those directorates made the determination. The level of detail in field category was acceptable to all three FFRDCs.
- Glossary. One participant was unaware of the glossary, one indicated she found it helpful to confirm that she was understanding key terms correctly, and the third indicated he was aware of it but did not need to refer to it. No one suggested additional definitions that could be included.
- General. All three FFRDC participants felt they were the best person at their FFRDC to respond to the survey. Two were human resources staff and did not need other staff to help answer the items. The third needed to obtain information from the various directorates housing the postdocs. All three liked reporting based on fiscal year, so that October 1 was a useful reference date for them.

## 7. REFERENCES

- American Association for Public Opinion Research (AAPOR). 2008. *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys*. 5th ed. Lenexa, KS.
- National Science Foundation/Division of Sciences Resources Statistics (NSF/SRS). 2006. *Federal Funds for Research and Development: Fiscal Years 2003–05*. Detailed Statistical Tables NSF 06-313. Arlington, VA. Available at <http://www.nsf.gov/statistics/nsf06313/pdf/nsf06313.pdf>.

**APPENDIX A:**  
**MASTER LIST OF FFRDCs, APRIL 2009**

TABLE A-1. Master list of federally funded research and development centers: 2009

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FFRDC

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Aerospace Federally Funded R&D Center  
 Ames Laboratory  
 Argonne National Laboratory  
 Arroyo Center  
 Brookhaven National Laboratory  
 C3I Federally Funded R&D Center  
 Center for Advanced Aviation System Development  
 Center for Enterprise Modernization  
 Center for Naval Analyses  
 Center for Nuclear Waste Regulatory Analyses  
 Centers for Communications and Computing  
 Fermi National Accelerator Laboratory  
 Homeland Security Studies and Analysis Institute  
 Homeland Security Systems Engineering and Development Institute  
 Idaho National Laboratory  
 Jet Propulsion Laboratory  
 Lawrence Berkeley National Laboratory  
 Lawrence Livermore National Laboratory  
 Lincoln Laboratory  
 Los Alamos National Laboratory  
 National Astronomy and Ionosphere Center  
 National Biodefense Analysis and Countermeasures Center  
 National Cancer Institute at Frederick  
 National Center for Atmospheric Research  
 National Defense Research Institute  
 National Optical Astronomy Observatory  
 National Radio Astronomy Observatory  
 National Renewable Energy Laboratory  
 Oak Ridge National Laboratory  
 Pacific Northwest National Laboratory  
 Princeton Plasma Physics Laboratory  
 Project Air Force  
 Sandia National Laboratories  
 Savannah River National Laboratory  
 Science and Technology Policy Institute  
 Software Engineering Institute  
 SLAC National Accelerator Laboratory  
 Studies and Analyses Center  
 Thomas Jefferson National Accelerator Facility

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FFRDC = federally funded research and development center.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

**APPENDIX B:**  
**FFRDC SURVEY COVER E-MAIL AND INSTRUMENT**

**Subject: NSF Survey of Postdoctorates at FFRDCs**

I am writing to invite you to join with other Federally Funded Research and Development Centers (FFRDCs) across the country in the National Science Foundation (NSF) Survey of postdoctoral appointees (postdocs) at FFRDCs. Your postdoctoral program serves as an important national resource in developing our nation's most talented researchers.

We are contacting you because you completed this survey for your organization in the past. Your ID and password are provided below. They give you access to the survey's web site. You may access the survey at any time using this link:

<http://www.ffrdc2009.org/>

Your User ID: [user ID]

Your Password: [password]

Your FFRDC: [FFRDC name]

Please complete the survey by March 1, 2010.

If you are not the correct person to respond to this survey, or if you have any questions, please contact Jean Lennon at [ffrdc@rti.org](mailto:ffrdc@rti.org) or 1-800-848-4075. You may also contact me at (703) 292-7790 ([sthill@nsf.gov](mailto:sthill@nsf.gov)).

Sincerely,

Susan T. Hill  
Project Manager  
NSF-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering  
Division of Science Resources Statistics  
National Science Foundation

## Worksheet for 2009 Survey of Postdoctorates at Federally Funded Research and Development Centers (2009 FFRDC Survey)

### Survey Information

#### Purpose and Background

For your FFRDC, report on the number and characteristics of postdocs. Your FFRDC is listed on the Master Government List of FFRDCs (<http://www.nsf.gov/statistics/ffrdc/start.cfm>), where FFRDC refers to the organizations, centers, laboratories, etc., named on that list.

This document provides a worksheet and instructions to help you compile your answers to the NSF 2009 Survey of Postdoctorates in FFRDCs. It is intended as an aid for use with the FFRDC Web survey. Please see the section **Submissions** below for more information about preparing and submitting your information.

Results from this survey will help provide NSF with a comprehensive picture of the training of the nation's postdocs in science, engineering, and health-related fields; postdocs in academic organization are gathered in the Survey of Graduate Students and Postdoctorates in Science and Engineering.

This information is collected under the authority of the National Science Foundation Act of 1950, as amended. Response is entirely voluntary. All information provided will be used for statistical purposes only. Not providing some or all of the information will in no way adversely affect your FFRDC.

#### Data Collected

Please use October 1, 2009 as the reference date when completing the items in the survey. This survey includes the following items:

- **Contact Information** – provide name, telephone number, and e-mail address for the survey respondent (the person completing this survey)
- **Item 1. Postdoc Definition** – identify the common characteristics of postdocs at your FFRDC
- **Item 2. Demographics** – provide counts of postdocs by citizenship, ethnicity/race, and sex
- **Item 3. Financial Support by Citizenship** – provide counts of postdocs by federal vs non-federal financial support and by citizenship
- **Item 4. Field of Research by Citizenship** – provide counts of postdocs by field of research and citizenship

#### Submissions

This worksheet is designed to aid you in gathering information for completing the FFRDC web survey.

- Use the FFRDC web survey to report and submit the information on this worksheet for your FFRDC
- Access the FFRDC survey at [www.FFRDC2009.org](http://www.FFRDC2009.org), using the ID and password you will receive by e-mail
- Submit data online to NSF by **March 1, 2010**
- To print all pages of this worksheet, please select the option for "entire workbook" under the "print what" box

#### SURVEY HELP

If you lost the ID and/or password to access the web survey or have any questions about your submission, please contact Jean Lennon at [FFRDC@rti.org](mailto:FFRDC@rti.org) or (800) 848-4075.

**Please Go to Next Page: Contact Information**



### Worksheet for 2009 FFRDC Survey

#### Contact Information

<b>FFRDC Name:</b>	<input type="text"/>
<b>FFRDC Address:</b>	<input type="text"/>
<b>Director's Name:</b>	<input type="text"/>

<b>Respondent's Name:</b>	<input type="text"/>
<b>Respondent's Telephone number:</b> (XXX-XXX-XXXX)	<input type="text"/>
<b>Respondent's E-mail Address:</b>	<input type="text"/>

#### SURVEY HELP

For survey help, please contact Jean Lennon at [FFRDC@rti.org](mailto:FFRDC@rti.org) or (800) 848-4075.

**Please Go to Item 1. Postdoc Definition**

**Worksheet for 2009 FFRDC Survey****Item 1. Postdoc Definition**

Different organizations have different definitions of postdocs. Listed below are common characteristics of postdocs used by different organizations. Please tell us which of the following characteristics are requirements for a postdoc at your FFRDC by placing a mark (X) in the appropriate column.

A. Postdoc Requirements	Is it required? (Mark (X) Yes or No)	
	Yes	No
▪ Requires a Ph.D. or an equivalent doctorate degree (such as a Sc. D., M.D., D.V.M., or D.D.S.)?		
▪ Requires that the doctorate was recently awarded?		
▪ Is a temporary position?		
▪ Is intended to provide training in research?		
▪ Is intended to advance professional skills?		
▪ Requires a full-time commitment to research?		
▪ Requires that the postdoc work under the direction of a senior scholar?		
▪ Is for a defined period of time (i.e. has a term limit)?		
▪ Requires publication of research in scholarly journals?		
▪ Requires mentorship for professional development?		
▪ Is intended to prepare the postdoc for an independent career in research?		

B. Does your FFRDC have a formal definition of a postdoc position? *Mark (X) yes or no.*

Yes

No

C. As of October 1, what was the total number of postdocs at your FFRDC?

Please use your FFRDC's definition of a postdoc. If your FFRDC does not have a definition, see the NSF definition in the glossary. (Note: please include clinical fellows if the primary purpose of the appointment is research)

\_\_\_\_\_ Total postdocs

**SURVEY HELP**

For survey help, please contact Jean Lennon at FFRDC@rti.org or (800) 848-4075.

**Please Go to Item 2. Demographics**

**Worksheet for 2009 FFRDC Survey****Item 2. Demographics**

As of October 1, 2009, how many male and female postdocs did this FFRDC have in each of the citizenship, ethnicity and race categories listed below?

Check this box if this unit had postdocs for which you cannot report complete data

- Please use your FFRDC's definition of a postdoc. See the **Glossary** for definitions of **foreign nationals, U.S. citizens and permanent residents, ethnicity, and race**
- Count postdocs who are Hispanic/Latino or Hispanic/Latino and any other race in Row B only
- Row and column totals are calculated automatically
- Count of total postdocs (Column 3, Row J) must match total postdocs in Item 1C

Citizenship, ethnicity, and race of postdocs (report postdocs in whole numbers)		Male 1	Female 2	Total 3
Foreign nationals holding temporary visas regardless of ethnicity or race	A	0	0	0
U.S. citizens and permanent residents (non-U.S. citizens holding green cards)				
• Hispanic/Latino ethnicity (one or more races).....	B	0	0	0
• Non-Hispanic/Latino ethnicity (one or more races)				
- One race, American Indian/Alaska Native.....	C	0	0	0
- One race, Asian.....	D	0	0	0
- One race, Black/African American.....	E	0	0	0
- One race, Native Hawaiian/Other Pacific Islander.....	F	0	0	0
- One race, White.....	G	0	0	0
- More than one race (non-Hispanic/Latino).....	H	0	0	0
• Ethnicity/race unknown or not stated.....	I	0	0	0
<b>Total postdocs (sum Rows A-I).....</b>	<b>J</b>	<b>0</b>	<b>0</b>	<b>0</b>

**SURVEY HELP**

For survey help, please contact Jean Lennon at FFRDC@rti.org or (800) 848-4075.

**Please Go to Item 3. Financial Support**

**Worksheet for 2009 FFRDC Survey****Item 3. Financial Support**

As of October 1, 2009, how many postdocs did this FFRDC have by citizenship status and federal/nonfederal financial support?

Check this box if this unit had postdocs for which you cannot report complete data

- Please use your FFRDC's definition of a postdoc. See the **Glossary** for definitions of **federal/non-federal financial support, foreign nationals, and U.S. citizens and permanent residents**
- Row and column totals are calculated automatically
- Count of total postdocs (Column 3, Row C) must match total postdocs in Item 1C

Federal vs non-Federal financial support of postdocs by citizenship. (report postdocs in whole numbers)		U.S. citizens & permanent residents 1	Foreign nationals (temp. visas) 2	Total postdocs 3
Postdocs with federal financial support	A	0	0	0
Postdocs with non-federal financial support	B	0	0	0
Total postdocs (sum Rows A-B)	C	0	0	0

**SURVEY HELP**

For survey help, please contact Jean Lennon at FFRDC@rti.org or (800) 848-4075.

**Please Go to Item 4. Field of Research**

**Worksheet for 2009 FFRDC Survey****Item 4: Field of Research**

Please list the divisions or fields of research for postdocs at your FFRDC and indicate how many postdocs were in each category overall and by citizenship status as of October 1, 2009.

Check this box if this unit had postdocs for which you cannot report complete data

- Please use your FFRDC's definition of a postdoc. See the Glossary definitions of fields of research foreign nationals, and U.S. Citizens and permanent residents
- Count postdocs in more than one field under one field only
- Row and column totals are calculated automatically
- Count of total postdocs (Column 3, Row c) must match total postdocs in Item 1C

Field of Research of postdocs (report postdocs in whole numbers)	U.S. citizens & permanent residents 1	Foreign nationals (temp. visas) 2	Total postdocs 3
<b>Science Fields</b>			
Agricultural Sciences	A 0	0	0
Biological Sciences	B 0	0	0
Chemistry	C 0	0	0
Computer Sciences	D 0	0	0
Earth, Atmospheric, and Ocean Sciences	E 0	0	0
Health Fields	F 0	0	0
Mathematical Sciences	G 0	0	0
Physics/Astronomy	H 0	0	0
Psychology	I 0	0	0
Social Sciences	J 0	0	0
Other Science Fields	K 0	0	0
<b>Engineering Fields</b>			
Aerospace Engineering	L 0	0	0
Agricultural Engineering	M 0	0	0
Biomedical Engineering	N 0	0	0
Chemical Engineering	O 0	0	0
Civil Engineering	P 0	0	0
Electrical Engineering	Q 0	0	0
Engineering Science and Physics	R 0	0	0
Industrial/Manufacturing Engineering	S 0	0	0
Materials/Metallurgical Engineering	T 0	0	0
Mechanical Engineering	U 0	0	0
Mining Engineering	V 0	0	0
Nuclear Engineering	W 0	0	0
Petroleum Engineering	X 0	0	0
Other Engineering Fields	Y 0	0	0
Multidisciplinary Fields	Z 0	0	0

<b>Other</b>				
Non Science or Engineering Field	<b>a</b>	0	0	0
Discipline Not Known	<b>b</b>	0	0	0
<b>Total (Sum of Rows A-b)</b>	<b>c</b>	0	0	0

**SURVEY HELP**

For survey help, please contact Jean Lennon at FFRDC@rti.org or (800) 848-4075.

**Please Go to Next Page: Glossary**

## Worksheet for 2009 FFRDC Survey

### Glossary

**Field of research.** The area of research that the postdoc's research currently focuses on. It may or may not be the field in which they received their degree. If a postdoc is in more than one field of research, please choose one field or multidisciplinary fields as appropriate.

**Federal support.** Postdoctoral support provided by a Federal agency such as the Department of Defense, Department of Energy, National Institutes of Health, or National Science Foundation.

**Foreign nationals with temporary visas.** Individuals in the United States on temporary visas. Do not include individuals who are native residents of Puerto Rico or a U.S. territory, or permanent residents holding green cards; they should be reported under U.S. citizens and permanent residents. Do not report foreign nationals by ethnicity or race.

**Hispanic/Latino ethnicity.** The U.S. Office of Management and Budget defines ethnicity separately from race (please see separate entry for Race). In this survey, ethnicity refers to whether an individual is of Hispanic or Latino descent—a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

**Non-federal support.** Postdoctoral support provided by a non-federal source such as private industry, a nonprofit, or an academic organization.

**Postdoc.** The definition of a postdoc varies by organization. Please use your FFRDC's definition of a postdoc. NSF defines a postdoc as meeting both of the following qualifications:

- (1) Holds a recent doctoral degree, generally awarded within the last 5 years, such as PhD or equivalent (e.g., ScD or DEng), or first professional degree in a medical or related field (MD, DDS, DO, DVM), or foreign degree equivalent to a U.S. doctoral degree; and
- (2) Has a limited-term appointment, generally no more than 5–7 years, primarily for training in research or scholarship and working under the supervision of a senior scholar in a unit affiliated with your organization.

**Race.** Only report race for U.S. citizens (including those from Puerto Rico and U.S. territories) and permanent residents. All foreign nationals holding temporary visas should be reported in Row A. The U.S. Office of Management and Budget defines race separately from ethnicity (please see entry for Ethnicity). The FFRDC survey uses the following definitions of race:

- One race, American Indian or Alaska Native—A person of only one race having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment
- One race, Asian—A person of only one race having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam
- One race, Black or African American—A person of only one race having origins in any of the black racial groups of Africa
- One race, Native Hawaiian or Other Pacific Islander—A person of only one race having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific islands
- One race, White—A person of only one race having origins in any of the original peoples of Europe, the Middle East, or North Africa
- More than one race reported (non-Hispanic/Latino)—Individuals reporting two or more of the race categories listed above. Individuals who report being Hispanic/Latino and one or more race, should be reported in Row B instead.

**U.S. citizens and permanent residents.** U.S. citizens, including those from Puerto Rico and the U.S. territories, and permanent residents holding green cards.

**APPENDIX C:**  
**RESPONDENT COMMUNICATION MATERIALS**

## 1. DIRECTOR'S LETTER



### National Science Foundation 2009 Survey of Postdoctorates at Federally Funded Research and Development Centers

January 15, 2010

[Insert FFRDC head's name,  
name of center, and  
address]

Dear [Insert title and last name]:

We invite you to join with other Federally Funded Research and Development Centers (FFRDCs) in the National Science Foundation's (NSF) survey of postdoctoral appointees (postdocs) at FFRDCs. Your postdoctoral program serves as an important national resource in developing our country's most talented researchers. The NSF collects information on the number and characteristics of postdocs in science, engineering and health-related fields at the nation's colleges, universities, and FFRDCs. This study is being conducted in connection with the Survey of Graduate Students and Postdoctorates in Science and Engineering and with support from the Department of Energy and the National Institutes of Health.

For the first time, the FFRDC survey will be administered via the Web. To obtain the most accurate information, we need your help in identifying the best person to provide data about postdocs at [CENTER NAME]. I have attached a copy of this year's survey form to help you to determine the best person. The following person responded in the last FFRDC survey on postdocs:

Name: [CONTACT NAME]  
Phone: [CONTACT PHONE]  
E-mail: [CONTACT E-MAIL]

Please contact us to confirm that the person above is still the best respondent for this year's FFRDC survey or, if not, to provide the name and contact information for a new respondent. To do this, please e-mail Jean Lennon at [FFRDC@rti.org](mailto:FFRDC@rti.org) or call her at 1-800-848-4075.

Your FFRDC's participation in this survey is voluntary but in the past the participation of FFRDCs has been 100 percent, given the importance of this effort.

If you have any questions, please contact Jean Lennon at 1-800-848-4075 ([FFRDC@rti.org](mailto:FFRDC@rti.org)) or the project officer, Susan T. Hill, of the Division of Science Resources Statistics at NSF at (703) 292-7790 ([sthill@nsf.gov](mailto:sthill@nsf.gov)).

Thank you for your cooperation; we look forward to working with you.

Sincerely,

Lynda T. Carlson, Ph.D.  
Director, Division of Science Resources Statistics  
National Science Foundation

## 2. DIRECTOR NONRESPONSE TELEPHONE SCRIPT

Hello, my name is ( ). I'm calling from RTI on behalf of the National Science Foundation This call is about the 2009 study on postdoctoral appointees in Federally Funded Research and Development Centers (FFRDCs). I wanted to check in with you to make sure that you are the appropriate respondent for the survey this year. About a week ago, we e-mailed your director some study information and asked [him/her] to confirm the appropriate respondent. Are you still the best respondent for this FFRDC?

[Describe purpose of study if necessary.]

Thank you for your assistance.

### VOICEMAIL SCRIPT:

Hi, I'm \_\_\_\_\_ from RTI calling on behalf of the National Science Foundation. I wanted to confirm that you received the materials we sent about the study on postdoctoral appointees in Federally Funded Research and Development Centers (FFRDCs). We would like to identify the best respondent at your center to provide the data. Please e-mail me or call me back at your earliest convenience. My e-mail address is [FFRDC@rti.org](mailto:FFRDC@rti.org) and my phone number is: \_\_\_\_\_.

### 3. RESPONDENT KICK-OFF E-MAIL

**Subject: NSF Survey of Postdoctorates at FFRDCs**

I am writing to invite you to join with other Federally Funded Research and Development Centers (FFRDCs) across the country in the National Science Foundation (NSF) Survey of postdoctoral appointees (postdocs) at FFRDCs. Your postdoctoral program serves as an important national resource in developing our nation's most talented researchers.

We are contacting you because you completed this survey for your organization in the past. Your ID and password are provided below. They give you access to the survey's web site. You may access the survey at any time using this link:

<http://www.ffrdc2009.org/>

Your User ID: [user ID]

Your Password: [password]

Your FFRDC: [FFRDC name]

Please complete the survey by March 1, 2010.

If you are not the correct person to respond to this survey, or if you have any questions, please contact Jean Lennon at [ffrdc@rti.org](mailto:ffrdc@rti.org) or 1-800-848-4075. You may also contact me at (703) 292-7790 ([sthill@nsf.gov](mailto:sthill@nsf.gov)).

Sincerely,

Susan T. Hill  
Project Manager  
NSF-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering  
Division of Science Resources Statistics  
National Science Foundation

#### 4. FIRST E-MAIL PROMPT FOR NONRESPONDERS

Dear [name],

I am writing to confirm that you received the National Science Foundation (NSF) Survey of Postdoctoral Appointees at Federally Funded Research and Development Centers (FFRDCs) that was sent via e-mail on January 31. If you did not receive the e-mail, or if you had any problems logging into the survey, or if you think you are not the appropriate person to complete the survey, please contact me at 1-800-848-4075 or at [FFRDC@rti.org](mailto:FFRDC@rti.org).

Your ID and password are provided below. They give you access to the survey's web site. You may access the survey at any time using this link:

<http://www.ffrdc2009.org/>

Your User ID: [user ID]

Your Password: [password]

Your FFRDC: [FFRDC name]

Please complete the survey by March 1, 2010.

If you have any questions about the survey, please feel free to contact me, or contact the survey manager, Susan Hill of the Division of Science Resources Statistics at NSF at (703) 292-7790 ([sthill@nsf.gov](mailto:sthill@nsf.gov)).

Thank you for your cooperation.

Jean Lennon, Ph.D.  
RTI International  
3040 E Cornwallis Road  
PO Box 12194  
Durham, NC 27709  
1-800-848-4075

## 5. SECOND E-MAIL PROMPT FOR NONRESPONDERS

Dear [name],

I am writing to remind you that the National Science Foundation (NSF) Survey of Postdoctoral Appointees at Federally Funded Research and Development Centers (FFRDCs) is due today, Monday, March 1. Please complete the survey as soon as possible using the login credentials below:

<http://www.ffrdc2009.org/>

Your User ID: [user ID]

Your Password: [password]

Your FFRDC: [FFRDC name]

If you have any questions about the survey, please feel free to contact me, or contact the survey manager, Susan Hill of the Division of Science Resources Statistics at NSF at (703) 292-7790 ([sthill@nsf.gov](mailto:sthill@nsf.gov)).

Thank you for your cooperation.

Jean Lennon, Ph.D.  
RTI International  
3040 E Cornwallis Road  
PO Box 12194  
Durham, NC 27709  
1-800-848-4075

## 6. THIRD E-MAIL PROMPT FOR NONRESPONDERS

I am writing to remind you that the National Science Foundation (NSF) Survey of Postdoctoral Appointees at Federally Funded Research and Development Centers (FFRDCs) **was due on Monday, March 1**. Please complete the survey as soon as possible. For your convenience, your login information is included again here:

Your User ID: [user ID]

Your Password: [password]

Your FFRDC: [FFRDC name]

The survey link: <http://www.ffrdc2009.org/>

If you are having problems with the survey or if you are no longer the correct person to respond to this survey, or if you have any questions, please contact me at the number below or contact the survey manager, Emilda Rivers of the Division of Science Resources Statistics at NSF at (703) 292-7773 ([erivers@nsf.gov](mailto:erivers@nsf.gov)).

Thank you for your cooperation.

Jean M. Lennon, Ph.D.  
Education Studies Division  
RTI International  
3040 Cornwallis Road  
Research Triangle Park, NC 27709  
Telephone: 1-800-848-4075  
E-mail: [ffrdc@rti.org](mailto:ffrdc@rti.org)

## 7. E-MAIL TO FFRDCS WITH NO POSTDOCS

Thank you for contacting us concerning our FFRDC survey. During that contact, you said that [center name] did not have postdoctoral appointees.

In our research, we have learned that some Centers use other personnel titles to identify “postdoctoral appointees.” These titles include “postdoctoral fellows,” “postdoctoral researchers,” and “research associates.” Prior to closing out our survey, we need to contact you once more to find out if your Center uses any of these other terms. If so, your Center should report data to us about individuals with these different titles. To do so, please use the login information below and complete the survey as soon as possible.

Your User ID: [user ID]

Your Password: [password]

Your FFRDC: [FFRDC name]

The survey link: <http://www.ffrdc2009.org/>

If you do not have any postdoctoral appointees, please respond to this e-mail or call me at 1-800-848-4075 with a yes or no answer to the two questions below.

- 1. Did this FFRDC ever have a postdoc program?**
- 2. Does this FFRDC have plans to have a postdoc program in the future?**

We would appreciate a response by Friday so that we may conclude our data collection activities promptly. Thank you again for your support of this survey. If you have any other questions, please feel free to contact me or contact the survey manager, Emilda Rivers of the Division of Science Resources Statistics at NSF at (703) 292-7773 ([erivers@nsf.gov](mailto:erivers@nsf.gov)). Thank you for your patience and assistance.

Jean M. Lennon, Ph.D.  
Education Studies Division  
RTI International  
3040 Cornwallis Road  
Research Triangle Park, NC 27709  
Telephone: 1-800-848-4075  
E-mail: [ffrdc@rti.org](mailto:ffrdc@rti.org)

**APPENDIX D:**  
**FFRDCs WITHOUT POSTDOCS**

TABLE D-1. Ineligible centers for Survey of Postdoctorates at Federally Funded Research and Development Centers: 2009

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FFRDC

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Arroyo Center  
C3I Federally Funded R&D Center  
Center for Advanced Aviation System Development  
Center for Enterprise Modernization  
Center for Naval Analyses  
Center for Nuclear Waste Regulatory Analyses  
Centers for Communication and Computing  
Homeland Security Studies and Analysis Institute  
Homeland Security Systems and Engineering Development Institute  
Lincoln Laboratory  
National Biodefense Analysis and Countermeasures Center  
National Defense Research Institute  
Project Air Force  
Science and Technology Policy Institute  
Software Engineering Institute  
Studies and Analyses Center

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FFRDC = federally funded research and development center.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2009.

**APPENDIX E:**  
**SUMMARY TABLES, 2004–07, 2009**

TABLE E-1. Total postdoctorates: 2004–07, 2009

FFRDC	2004 postdoctorates	2005 postdoctorates	2006 postdoctorates	2007 postdoctorates	2009 postdoctorates
All FFRDCs	2,212	1,820	2,147	2,235	2,449
Aerospace Federally Funded R&D Center	0	0	0	0	1
Ames Laboratory	77	72	37	50	44
Argonne National Laboratory	178	146	146	146	189
Brookhaven National Laboratory	119	127	136	142	162
Fermi National Accelerator Laboratory	47	52	57	59	56
Idaho National Laboratory	19	7	10	16	10
Jet Propulsion Laboratory	82	76	100	102	132
Lawrence Berkeley National Laboratory	303	283	285	303	451
Lawrence Livermore National Laboratory	222	139	145	138	110
Los Alamos National Laboratory	406	323	365	365	337
National Astronomy and Ionosphere Center	3	1	4	3	4
National Cancer Institute at Frederick	0	0	319	324	247
National Center for Atmospheric Research	66	73	56	32	24
National Optical Astronomy Observatory	9	6	22	18	10
National Radio Astronomy Observatory	23	17	21	22	14
National Renewable Energy Laboratory	45	33	34	43	95
Oak Ridge National Laboratory	150	143	158	158	170
Pacific Northwest National Laboratory	136	100	45	100	129
Princeton Plasma Physics Laboratory	7	11	2	4	7
Sandia National Laboratories	127	142	113	113	152
Savannah River National Laboratory	11	18	2	11	14
SLAC National Accelerator Laboratory	171	39	62	57	54
Thomas Jefferson National Accelerator Facility	11	12	28	29	37

FFRDC = federally funded research and development center.

NOTES: Interpret large changes between years with caution; numbers have been verified, but changes may be the result of programmatic changes at the institutional level that were not tracked. Data were not collected in 2008.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2004–07, 2009.

TABLE E-2. Total postdoctorates, female temporary visa holders: 2004–07, 2009

FFRDC	2004			2005			2006			2007			2009		
	All postdocs	Females	Female temporary visa holders	All postdocs	Females	Female temporary visa holders	All postdocs	Females	Female temporary visa holders	All postdocs	Females	Female temporary visa holders	All postdocs	Females	Female temporary visa holders
All FFRDCs	2,212	445	166	1,820	390	193	2,147	455	278	2,235	450	253	2,449	513	277
Aerospace Federally Funded R&D Center	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Ames Laboratory	77	8	7	72	13	10	37	9	6	50	10	8	44	47	10
Argonne National Laboratory	178	34	27	146	29	22	146	40	33	146	40	33	189	36	27
Brookhaven National Laboratory	119	27	21	127	29	37	136	35	28	142	37	23	162	11	22
Fermi National Accelerator Laboratory	47	12	10	52	15	13	57	10	4	59	11	5	56	NA	9
Idaho National Laboratory	19	5	0	7	3	NA	10	0	0	16	2	1	10	32	NA
Jet Propulsion Laboratory	82	25	0	76	21	13	100	33	24	102	23	11	132	131	19
Lawrence Berkeley National Laboratory	303	73	0	283	76	NA	285	76	56	303	75	51	451	31	80
Lawrence Livermore National Laboratory	222	58	23	139	29	13	145	41	13	138	45	12	110	69	9
Los Alamos National Laboratory	406	75	35	323	54	27	365	75	42	365	75	30	337	2	22
National Astronomy and Ionosphere Center	3	4	1	1	NA	NA	4	2	2	3	1	1	4	NA	2
National Cancer Institute at Frederick	NA	NA	NA	NA	NA	NA	319	NA	NA	324	NA	NA	247	7	NA
National Center for Atmospheric Research	66	26	9	73	23	10	56	30	19	32	16	11	24	0	2
National Optical Astronomy Observatory	9	1	1	6	NA	NA	22	8	3	18	0	0	10	5	0
National Radio Astronomy Observatory	23	4	3	17	5	2	21	4	4	22	4	4	14	25	3
National Renewable Energy Laboratory	45	10	0	33	4	2	34	4	2	43	7	3	95	28	12
Oak Ridge National Laboratory	150	28	23	143	31	19	158	32	20	158	39	30	170	27	20
Pacific Northwest National Laboratory	136	25	0	100	23	12	45	15	8	100	25	16	129	1	12
Princeton Plasma Physics Laboratory	7	0	0	11	NA	3	2	0	0	4	1	1	7	27	1
Sandia National Laboratories	127	23	4	142	19	7	113	24	7	113	24	7	152	5	14
Savannah River National Laboratory	11	4	0	18	6	NA	2	1	0	11	4	1	14	12	0
SLAC National Accelerator Laboratory	171	0	0	39	7	NA	62	13	5	57	9	4	54	7	9
Thomas Jefferson National Accelerator Facility	11	3	2	12	3	3	28	3	2	29	2	1	37	0	4

NA = not available.

FFRDC = federally funded research and development center.

NOTES: Interpret large changes between years with caution; numbers have been verified, but changes may be the result of programmatic changes at the institution level that were not tracked. Data were not collected in 2008.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2004–07, 2009.

TABLE E-3. Total postdoctorates, male temporary visa holders: 2004–07, 2009

FFRDC	2004			2005			2006			2007			2009		
	All postdocs	Males	Male temporary visa holders	All postdocs	Males	Male temporary visa holders	All postdocs	Males	Male temporary visa holders	All postdocs	Males	Male temporary visa holders	All postdocs	Males	Male temporary visa holders
All FFRDCs	2,212	1,768	844	1,820	1,430	684	2,147	1,373	921	2,235	1,461	906	2,449	1,679	1,016
Aerospace Federally Funded R&D Center	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Ames Laboratory	77	69	66	72	59	50	37	28	23	50	40	37	44	34	28
Argonne National Laboratory	178	144	116	146	117	97	146	106	86	146	106	86	189	142	116
Brookhaven National Laboratory	119	92	77	127	98	53	136	101	84	142	105	86	162	126	100
Fermi National Accelerator Laboratory	47	35	10	52	37	24	57	47	28	59	48	32	56	45	26
Idaho National Laboratory	19	14	11	7	4	NA	10	10	6	16	14	10	10	NA	NA
Jet Propulsion Laboratory	82	57	NA	76	55	39	100	67	54	102	79	52	132	100	68
Lawrence Berkeley National Laboratory	303	230	85	283	207	NA	285	209	146	303	228	168	451	320	214
Lawrence Livermore National Laboratory	222	164	54	139	110	51	145	104	39	138	93	31	110	79	21
Los Alamos National Laboratory	406	331	209	323	269	157	365	290	182	365	290	153	337	268	130
National Astronomy and Ionosphere Center	3	NA	NA	1	1	NA	4	2	2	3	2	2	4	2	1
National Cancer Institute at Frederick	NA	NA	NA	NA	NA	NA	319	NA	NA	324	NA	NA	247	NA	NA
National Center for Atmospheric Research	66	40	11	73	50	27	56	26	19	32	16	9	24	17	10
National Optical Astronomy Observatory	9	8	4	6	6	NA	22	14	5	18	18	9	10	10	2
National Radio Astronomy Observatory	23	19	8	17	12	3	21	17	8	22	18	6	14	9	7
National Renewable Energy Laboratory	45	35	NA	33	29	2	34	30	20	43	36	21	95	70	34
Oak Ridge National Laboratory	150	122	88	143	112	76	158	126	104	158	119	72	170	142	103
Pacific Northwest National Laboratory	136	111	61	100	77	52	45	30	22	100	75	45	129	102	61
Princeton Plasma Physics Laboratory	7	7	3	11	11	2	2	2	1	4	3	2	7	6	2
Sandia National Laboratories	127	104	37	142	123	42	113	89	28	113	89	29	152	125	43
Savannah River National Laboratory	11	7	NA	18	12	2	2	1	0	11	7	0	14	9	0
SLAC National Accelerator Laboratory	171	171	NA	39	32	NA	62	49	45	57	48	35	54	42	31
Thomas Jefferson National Accelerator Facility	11	8	4	12	9	7	28	25	19	29	27	21	37	30	19

NA = not available.

FFRDC = federally funded research and development center.

NOTES: Interpret large changes between years with caution; numbers have been verified, but changes may be the result of programmatic changes at the institution level that were not tracked. Data were not collected in 2008.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2004–07, 2009.

TABLE E-4. Postdoctorates, by primary source of support: 2006, 2007, 2009

FFRDC	Federal funding			Nonfederal funding		
	2006	2007	2009	2006	2007	2009
All FFRDCs	1,641	2,030	2,258	506	205	181
Aerospace Federally Funded R&D Center	0	0	0	0	0	1
Ames Laboratory	37	50	44	0	0	0
Argonne National Laboratory	146	146	189	0	0	0
Brookhaven National Laboratory	0	0	162	136	142	0
Fermi National Accelerator Laboratory	57	59	56	0	0	0
Idaho National Laboratory	10	15	NA	0	1	NA
Jet Propulsion Laboratory	40	102	132	60	0	0
Lawrence Berkeley National Laboratory	209	282	364	76	21	87
Lawrence Livermore National Laboratory	133	138	110	12	0	0
Los Alamos National Laboratory	159	347	280	206	18	57
National Astronomy and Ionosphere Center	4	3	4	0	0	0
National Cancer Institute at Frederick	319	324	247	0	0	0
National Center for Atmospheric Research	51	25	22	5	7	2
National Optical Astronomy Observatory	22	18	9	0	0	1
National Radio Astronomy Observatory	20	19	13	1	3	1
National Renewable Energy Laboratory	34	43	94	0	0	1
Oak Ridge National Laboratory	158	158	169	0	0	1
Pacific Northwest National Laboratory	43	100	129	2	0	0
Princeton Plasma Physics Laboratory	2	4	7	0	0	0
Sandia National Laboratories	107	107	146	6	6	6
Savannah River National Laboratory	2	11	14	0	0	0
SLAC National Accelerator Laboratory	60	50	54	2	7	0
Thomas Jefferson National Accelerator Facility	28	29	13	0	0	24

NA = not available.

FFRDC = federally funded research and development center.

NOTES: Interpret large changes between years with caution; numbers have been verified, but changes may be the result of programmatic changes at the institutional level that were not tracked. Data were not collected in 2008. Data for 2004 and 2005 were not reported due to large amount of missing data.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2006, 2007, 2009.

TABLE E-5. Postdoctorates, by citizenship: 2004–07, 2009

FFRDC	2004		2005		2006		2007		2009	
	U.S. citizens and permanent residents	Temporary visa holders	U.S. citizens and permanent residents	Temporary visa holders	U.S. citizens and permanent residents	Temporary visa holders	U.S. citizens and permanent residents	Temporary visa holders	U.S. citizens and permanent residents	Temporary visa holders
All FFRDCs	1,186	1,026	654	1,120	774	1,373	899	1,336	979	1,460
Aerospace Federally Funded R&D Center	0	0	0	0	0	0	0	0	1	0
Ames Laboratory	4	73	12	60	8	29	5	45	6	38
Argonne National Laboratory	35	143	27	119	27	119	27	119	46	143
Brookhaven National Laboratory	21	98	37	90	24	112	33	109	40	122
Fermi National Accelerator Laboratory	13	34	15	37	25	32	22	37	21	35
Idaho National Laboratory	8	11	NA	NA	4	6	5	11	NA	NA
Jet Propulsion Laboratory	82	0	24	52	22	78	39	63	45	87
Lawrence Berkeley National Laboratory	218	85	63	220	83	202	84	219	157	294
Lawrence Livermore National Laboratory	145	77	75	64	93	52	95	43	80	30
Los Alamos National Laboratory	162	244	139	184	141	224	182	183	185	152
National Astronomy and Ionosphere Center	0	3	0	1	0	4	0	3	1	3
National Cancer Institute at Frederick	0	0	0	0	146	173	148	176	80	167
National Center for Atmospheric Research	46	20	36	37	18	38	12	20	12	12
National Optical Astronomy Observatory	4	5	2	4	14	8	9	9	8	2
National Radio Astronomy Observatory	12	11	12	5	9	12	12	10	4	10
National Renewable Energy Laboratory	45	0	11	22	12	22	19	24	49	46
Oak Ridge National Laboratory	39	111	48	95	33	125	56	102	47	123
Pacific Northwest National Laboratory	75	61	36	64	15	30	39	61	56	73
Princeton Plasma Physics Laboratory	4	3	6	5	1	1	1	3	4	3
Sandia National Laboratories	86	41	93	49	78	35	77	36	95	57
Savannah River National Laboratory	11	0	16	2	2	0	10	1	14	0
SLAC National Accelerator Laboratory	171	0	NA	NA	12	50	17	40	14	40
Thomas Jefferson National Accelerator Facility	5	6	2	10	7	21	7	22	14	23

NA = not available.

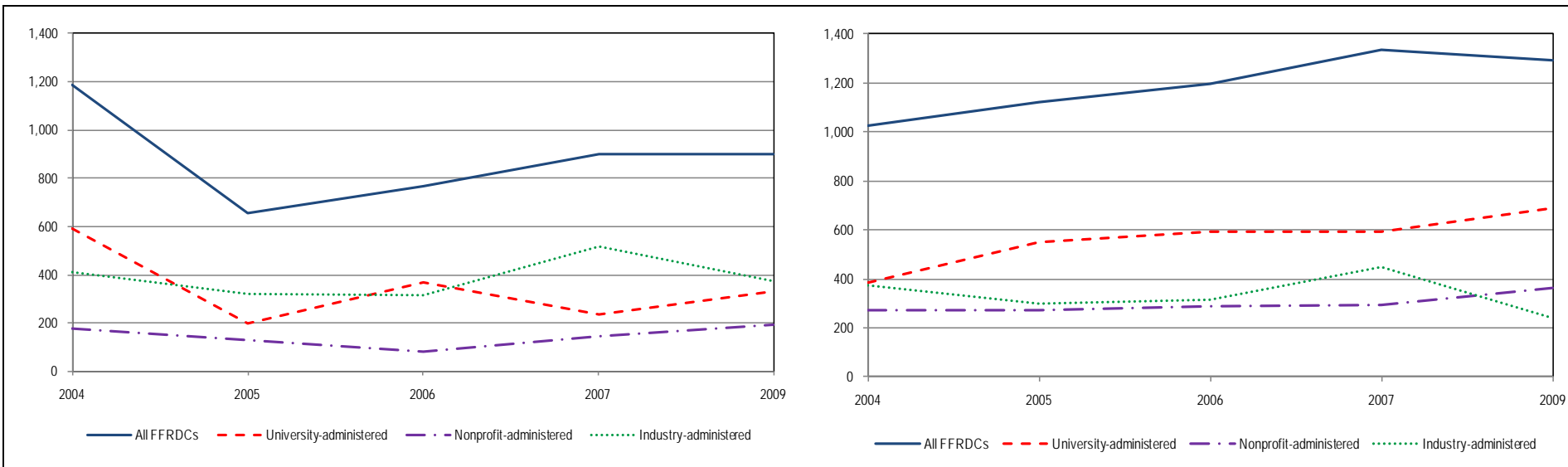
FFRDC = federally funded research and development center.

NOTE: Interpret large changes between years with caution; numbers have been verified, but changes may be the result of programmatic changes at the institutional level that were not tracked. Data were not collected in 2008.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2004–07, 2009.

FIGURE 1a. Postdoctorates at federally funded research and development centers: U.S. citizens and permanent residents, 2004–07, 2009

FIGURE 1b. Postdoctorates at federally funded research and development centers: Temporary visa holders, 2004–07, 2009



FFRDC = Federally funded research and development center.

NOTE: Data were not collected in 2008.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Postdoctorates at Federally Funded Research and Development Centers, FY 2004–07, 2009.