The Involvement of Women in NIH Extramural Research, Research Training, and Career Development Programs

## Involvement of Women in NIH Extramural Programs

Female Postdoctoral Ruth L. Kirschstein NRSA Individual Fellowship Recipients (F32)


Fiscal Year

## Involvement of Women in NIH Extramural Programs

- How does NIH identify the sex/gender of applicants for NIH Research Grants?
- The NIH on the Personal Data Page of the PHS 398 Grant Application form (see http://grants.nih.gov/grants/funding/phs398/personal.doc.
- For the electronic application SF424 (R\&R) http://grants.nih.gov/grants/funding/424/index.htm this kind of information is collected in the Commons https://commons.era.nih.gov/commons/
- Providing information on sex/gender is voluntary.
- The information is not provided to reviewers.
- The information is protected by the Privacy Act.
- About 99\% of all awardees provide sex/gender information.
- How has the participation of Women in NIH Research Training Programs Changed over Time?
- The number of women receiving individual predoctoral NRSA fellowships increased nearly 5 fold since 1993, but the share of fellowships going to women declined from $73 \%$ in 1990 to about $60 \%$ in 1993 and has been stable since that time.
- Women have slowly increased their share of individual postdoctoral NRSA fellowships. In FY 2006 slightly more than $44 \%$ of the recipients were women.
- Women have steadily increased their share of both predoctoral and postdoctoral positions on NRSA research training grants. In FY 2006 women comprised more than $55 \%$ of the predoctoral positions and more than $50 \%$ of the postdoctoral positions.


## Involvement of Women in NIH Extramural Programs

## Female Predoctoral Ruth L. Kirschstein NRSA Predoctoral Fellowship Recipients (F31)



## Involvement of Women in NIH Extramural Programs

NIH Research Fellowship Awards, FY 1990 2006
FY Total Female Male of coded

Pre-Doc Fellowship (F30, F31)

| 1990 | 334 | 172 | 63 | $73.2 \%$ |
| ---: | ---: | ---: | ---: | ---: |
| 1991 | 512 | 275 | 140 | $66.3 \%$ |
| 1992 | 531 | 277 | 159 | $63.5 \%$ |
| 1993 | 587 | 314 | 224 | $58.4 \%$ |
| 1994 | 646 | 348 | 247 | $58.5 \%$ |
| 1995 | 625 | 341 | 239 | $58.8 \%$ |
| 1996 | 673 | 375 | 264 | $58.7 \%$ |
| 1997 | 665 | 358 | 275 | $56.6 \%$ |
| 1998 | 664 | 358 | 271 | $56.9 \%$ |
| 1999 | 692 | 380 | 268 | $58.6 \%$ |
| 2000 | 741 | 410 | 275 | $59.9 \%$ |
| 2001 | 907 | 498 | 343 | $59.2 \%$ |
| 2002 | 1,021 | 566 | 401 | $58.5 \%$ |
| 2003 | 1,111 | 623 | 437 | $58.8 \%$ |
| 2004 | 1,202 | 682 | 479 | $58.7 \%$ |
| 2005 | 1,267 | 745 | 489 | $60.4 \%$ |
| 2006 | 1,370 | 785 | 529 | $59.7 \%$ |
|  |  |  |  |  |

## Involvement of Women in NIH Extramural Programs

## Women and Men Supported by NIH Postdoctoral Fellowships, FY 1990 2006

## Postdoctoral Fellowships (F32)

| FY | Total | Female | Male | Female as <br> $\%$ of coded |
| ---: | ---: | ---: | ---: | ---: |
| 1990 | 1654 | 515 | 737 | $41.1 \%$ |
| 1501 | 1550 | 549 | 776 | $41.4 \%$ |
| 1992 | 1645 | 579 | 520 | $41.4 \%$ |
| 1993 | 1637 | 621 | 882 | $41.3 \%$ |
| 1994 | 1710 | 654 | 914 | $41.7 \%$ |
| 1995 | 1877 | 735 | 1009 | $42.1 \%$ |
| 1996 | 1941 | 779 | 1028 | $43.1 \%$ |
| 1997 | 1950 | 779 | 1030 | $43.1 \%$ |
| 1998 | 1878 | 718 | 1030 | $41.1 \%$ |
| 1999 | 1910 | 748 | 1054 | $41.5 \%$ |
| 2000 | 1851 | 744 | 1002 | $42.6 \%$ |
| 2001 | 1805 | 786 | 942 | $45.5 \%$ |
| 2002 | 1656 | 721 | 867 | $45.4 \%$ |
| 2003 | 1614 | 669 | 894 | $42.8 \%$ |
| 2004 | 1577 | 646 | 901 | $41.8 \%$ |
| 2005 | 1617 | 682 | 910 | $42.8 \%$ |
| 2006 | 1587 | 672 | 838 | $44.5 \%$ |

## Involvement of Women in NIH Extramural Programs

Women as a Percentage of Predoctoral and Postodoctoral Trainees Supported by Ruth L. Kirschstein Institutional Research Training Grants


## Women and Men Supported as Predoctoral and Postdoctoral Trainees on NIH Research Training Grants, FY 1993-2006

|  | Pre-Doc |  |  |  | Post-Doc |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Women as |  |  |  | Women as |
|  |  |  |  | Percent of |  |  |  | Percent of |
| FY | Total | Women | Men | Coded | Total | Women | Men | Coded |
| 1993 | 8626 | 4117 | 4493 | 47.8\% | 4496 | 1879 | 2606 | 41.9\% |
| 1994 | 8969 | 4364 | 4573 | 48.8\% | 4614 | 1983 | 2620 | 43.1\% |
| 1995 | 9031 | 4426 | 4569 | 49.2\% | 4439 | 1915 | 2510 | 43.3\% |
| 1996 | 8988 | 4369 | 4480 | 49.4\% | 4419 | 1964 | 2408 | 44.9\% |
| 1997 | 8830 | 4167 | 4198 | 49.8\% | 4422 | 1922 | 2307 | 45.4\% |
| 1998 | 9216 | 4035 | 3793 | 51.5\% | 4485 | 1885 | 2136 | 46.8\% |
| 1999 | 9544 | 4317 | 4005 | 51.9\% | 4559 | 1954 | 2279 | 46.1\% |
| 2000 | 9287 | 4558 | 4246 | 51.8\% | 4613 | 2108 | 2359 | 47.2\% |
| 2001 | 9604 | 4992 | 4328 | 53.6\% | 4858 | 2247 | 2524 | 47.1\% |
| 2002 | 9957 | 5283 | 4332 | 54.9\% | 5069 | 2402 | 2562 | 48.4\% |
| 2003 | 10400 | 5487 | 4549 | 54.7\% | 5323 | 2517 | 2714 | 48.0\% |
| 2004 | 10596 | 5679 | 4572 | 55.4\% | 5354 | 2562 | 2684 | 48.6\% |
| 2005 | 9967 | 5372 | 4346 | 55.3\% | 4760 | 2323 | 2355 | 49.6\% |
| 2006 | 5994 | 3232 | 2595 | 55.5\% | 2212 | 1099 | 1069 | 50.5\% |

[^0]trainee data based on receipt of appointment forms from trainees
between 1 and 10 percent of records uncoded over the years from 1993-2006

- How has the participation of Women in the NIH Career Development Program Changed over Time?
- The number of women supported by mentored research career development awards (K01, K08, K23) has increased more than 10 fold since 1990.
- The share of awards going to women has increased substantially.
- In 1990 24\% of mentored career awards were held by women.
- That proportion increased to nearly 43\% by FY 2006.
- The number of women supported by independent research career awards (K02, K24) has increased more than 4 fold since 1990.
- The proportion of awards going to women has remained steady at approximately $31 \%$ since 1990.


## Involvement of Women in NIH Extramural Programs

Female Recipeints on Mentored (K01, K08, K23) and nonMentored (K02, K04) Research Career Awards


## Involvement of Women in NIH Extramural Programs

## NIH Research Career Development Awards, FY 1990-2005

FY Total Female Male of coded

Mentored Research Career (K01, K08, K23)

| 1990 | 549 | 120 | 373 | $24.3 \%$ |
| ---: | ---: | ---: | ---: | ---: |
| 1991 | 573 | 128 | 395 | $24.5 \%$ |
| 1992 | 620 | 148 | 427 | $25.7 \%$ |
| 1993 | 686 | 176 | 469 | $27.3 \%$ |
| 1994 | 784 | 217 | 541 | $28.6 \%$ |
| 1995 | 849 | 249 | 577 | $30.1 \%$ |
| 1996 | 1,016 | 312 | 670 | $31.8 \%$ |
| 1997 | 1,194 | 395 | 758 | $34.3 \%$ |
| 1998 | 1,398 | 481 | 856 | $36.0 \%$ |
| 1999 | 1,602 | 545 | 979 | $35.8 \%$ |
| 2000 | 1,941 | 676 | 1,140 | $37.2 \%$ |
| 2001 | 2,166 | 749 | 1,275 | $37.0 \%$ |
| 2002 | 2,428 | 876 | 1,389 | $38.7 \%$ |
| 2003 | 2,719 | 998 | 1,541 | $39.3 \%$ |
| 2004 | 2,928 | 1,131 | 1,621 | $41.1 \%$ |
| 2005 | 3,045 | 1,195 | 1,698 | $41.3 \%$ |
| 2006 | 3,018 | 1,222 | 1,633 | $42.8 \%$ |

## Involvement of Women in NIH Extramural Programs

## NIH Research Career Development Awards, FY 1990-2005

FY Total Female Male of coded

Other Research Career (K02, K24)

| 1990 | 119 | 36 | 80 | $31.0 \%$ |
| ---: | ---: | ---: | ---: | ---: |
| 1991 | 121 | 37 | 82 | $31.1 \%$ |
| 1992 | 118 | 37 | 79 | $31.9 \%$ |
| 1993 | 136 | 40 | 92 | $30.3 \%$ |
| 1994 | 146 | 44 | 97 | $31.2 \%$ |
| 1995 | 152 | 44 | 104 | $29.7 \%$ |
| 1996 | 192 | 58 | 128 | $31.2 \%$ |
| 1997 | 225 | 72 | 147 | $32.9 \%$ |
| 1998 | 256 | 81 | 168 | $32.5 \%$ |
| 1999 | 358 | 103 | 244 | $29.7 \%$ |
| 2000 | 456 | 135 | 307 | $30.5 \%$ |
| 2001 | 509 | 148 | 350 | $29.7 \%$ |
| 2002 | 539 | 153 | 372 | $29.1 \%$ |
| 2003 | 565 | 159 | 393 | $28.8 \%$ |
| 2004 | 519 | 159 | 347 | $31.4 \%$ |
| 2005 | 513 | 156 | 347 | $31.0 \%$ |
| 2006 | 482 | 151 | 321 | $32.0 \%$ |

- How has the participation of Women in NIH research training and Career Development Programs Changed over Time?
- Women have increased their share of predoctoral and postdoctoral research training and mentored career development positions substantially since 1990.
- The share of fellowship positions and independent career awards awarded to women has remained stable.
- Women are now close to parity with men on training and mentored career development awards but still lag behind men on independent career development awards.


## Involvement of Women in NIH Extramural Programs

## Participation Rates for Women in Selected Research Training and Career Development Activities

Women as Percent of Coded Participants

FY 1990-2006 (To date)
$80 \%$
$70 \%$

60\%

50\%

40\%

30\%
Pre-Doc Fellowship (F30, F31)
Predoctoral Training
20\%

- Postdoctoral training Postdoctoral Fellow (F32)
——Mentored Research Career (K01, K08, K23) $10 \%$
Other Research Career (K02, K24)

- How has the participation of women in NIH research programs changed over time?
- Looking at all research grants (includes all research project grants, center grants, research career awards, SBIR, STTR and a few others)
- Over the period from 1994 to 2006 the total number of research grants going to women has nearly doubled and the total amount of those awards has increased more than 3 fold.
- Women received $\mathbf{1 6 . 9 \%}$ of all research grants in 1994 and 21.3\% in 2006.
- The average size of a research grant to female Pls is about $80 \%$ of the average size of a research grant awarded to a male PI.


## Involvement of Women in NIH Extramural Programs



## Involvement of Women in NIH Extramural Programs

Average Size of Research Grant Awards to Women and Men Along
with Women's Grants Expressed as a Percentage of the Size of
Men's Grants


## Involvement of Women in NIH Extramural Programs

## NIH Competing and Non-Competing Research Grant Awards, FY 1994-2006

|  | All Awards |  |  |  |  | Awards to Women |  |  |  |  | Awards to Men |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FY | Number | Amount | Average | Number | Amount | Average | Number | Amount | Average |  |  |  |
| 1994 | 30,373 | $\$$ | $7,648,458,566$ | $\$ 251,818$ | 6,098 | $\$ 1,291,909,145$ | $\$ 211,858$ |  | 22,970 | $\$ 6,075,720,186$ | $\$ 264,507$ |  |
| 1995 | 29,957 | $\$$ | $7,928,100,482$ | $\$ 264,649$ | 6,308 | $\$ 1,391,220,789$ | $\$ 220,549$ | 22,686 | $\$ 6,302,308,382$ | $\$ 277,806$ |  |  |
| 1996 | 30,554 | $\$$ | $8,393,484,767$ | $\$ 274,710$ | 6,590 | $\$ 1,517,684,434$ | $\$ 230,301$ | 23,028 | $\$ 6,619,427,189$ | $\$ 287,451$ |  |  |
| 1997 | 32,109 | $\$$ | $9,046,542,619$ | $\$ 281,745$ | 6,974 | $\$ 1,633,967,197$ | $\$ 234,294$ | 24,118 | $\$ 7,130,122,155$ | $\$ 295,635$ |  |  |
| 1998 | 33,700 | $\$ 9,800,496,534$ | $\$ 290,816$ | 7,362 | $\$ 1,778,403,076$ | $\$ 241,565$ | 24,877 | $\$ 7,517,738,555$ | $\$ 302,196$ |  |  |  |
| 1999 | 35,874 | $\$ 11,229,447,858$ | $\$ 313,025$ | 8,040 | $\$ 2,144,490,360$ | $\$ 266,728$ | 26,753 | $\$ 8,701,158,914$ | $\$ 325,240$ |  |  |  |
| 2000 | 38,301 | $\$ 13,002,508,001$ | $\$ 339,482$ | 8,713 | $\$ 2,541,554,969$ | $\$ 291,697$ | 28,320 | $\$ 9,989,878,211$ | $\$ 352,750$ |  |  |  |
| 2001 | 40,664 | $\$ 14,907,516,041$ | $\$ 366,602$ | 9,386 | $\$ 2,937,614,964$ | $\$ 312,978$ | 29,890 | $\$ 11,412,976,879$ | $\$ 381,833$ |  |  |  |
| 2002 | 43,520 | $\$ 16,830,194,185$ | $\$ 386,723$ | 10,199 | $\$ 3,367,396,540$ | $\$ 330,169$ | 31,801 | $\$ 12,817,285,291$ | $\$ 403,047$ |  |  |  |
| 2003 | 46,081 | $\$ 18,461,462,170$ | $\$ 400,631$ | 11,080 | $\$ 3,795,380,153$ | $\$ 342,543$ | 33,416 | $\$ 14,010,117,983$ | $\$ 419,264$ |  |  |  |
| 2004 | 47,464 | $\$ 19,607,812,023$ | $\$ 413,109$ | 11,693 | $\$ 4,067,519,485$ | $\$ 347,859$ | 34,200 | $\$ 14,838,720,014$ | $\$ 433,881$ |  |  |  |
| 2005 | 47,345 | $\$ 20,206,478,806$ | $\$ 426,785$ | 11,998 | $\$ 4,245,982,038$ | $\$ 353,779$ | 33,870 | $\$ 15,247,828,912$ | $\$ 450,304$ |  |  |  |
| 2006 | 46,797 | $\$ 20,154,363,154$ | $\$ 430,676$ | 11,929 | $\$ 4,297,673,965$ | $\$ 360,271$ | 33,107 | $\$ 14,991,284,499$ | $\$ 452,813$ |  |  |  |

- Broken down by budget category, what proportion of awards went to women in FY 2006?
- Across budget categories, women were Principal Investigators (Pls) on about 17\% of Centers and SBIR/STTR grants, between $\mathbf{2 5 \%}$ and $26 \%$ of the RPGs, and other Research Grants, and on 39\% of all career awards
- Across budget categories, women Pls on grants comprise 11\% of the total funding for Centers, $16 \%$ of the SBIR/STTR grants, $16 \%$ of the other Research Grants, $23 \%$ of the RPGs, and $36 \%$ of the career awards.
- The average size of grants going to women compared to men varies across budget category from $55 \%$ on other Research Grants to $97 \%$ on SBIR/STTR awards.
- For RPGs in FY 2006 the average size of grant with a female PI is $92 \%$ of the size of a grant to a male.


## Involvement of Women in NIH Extramural Programs

Average Size of Grants to Women Compared to Men by Budget
Category
FY 2006


## Involvement of Women in NIH Extramural Programs

## NIH Research Grants by Budget Category, FY 2006

| ACTIVITY | All Awards |  |  | Awards to Women |  |  | Awards to Men |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Amount | Average | Number | Amount | Average | Number | Amount | Average |
| Career | 4,254 | \$ 662,905,825 | \$ 155,831 | 1,654 | \$ 240,975,231 | \$ 145,692 | 2,394 | \$ 387,800,868 | \$ 161,989 |
| SBIR/STTR | 1,844 | \$ 621,653,450 | \$ 337,122 | 306 | \$ 100,247,347 | \$ 327,606 | 1,313 | \$ 443,361,192 | \$ 337,670 |
| RPG | 36,814 | \$14,852,789,984 | \$ 403,455 | 9,118 | \$ 3,454,500,482 | \$ 378,866 | 26,640 | \$ 10,955,776,724 | \$ 411,253 |
| Total | 42,912 | \$16,137,349,259 | \$ 376,057 | 11,078 | \$ 3,795,723,060 | \$ 342,636 | 30,347 | \$ 11,786,938,784 | \$ 388,405 |
| Other | 2,397 | \$ 1,220,194,738 | \$ 509,051 | 602 | \$ 189,790,499 | \$ 315,267 | 1,624 | \$ 933,339,815 | \$ 574,717 |
| Centers | 1,488 | \$ 2,796,819,157 | \$ 1,879,583 | 249 | \$ 312,160,406 | \$1,253,656 | 1,136 | \$ 2,271,005,900 | \$ 1,999,125 |

FY 2006 data as of January 22, 2007
Source: IMPAC-II Pub files - Program awards_by_gender_050921_fy2006_rfm

- How has the participation of women as Principal Investigators on NIH traditional research grants (R01s) changed over time?
- Since 1994 the number of competing and non-competing R01 awards going to female Pls has increased from 4,459 to 7,046 or nearly 1.6 fold.
- The total amount of those grants has increased 2.8 fold.
- The proportion of R01s going to women has increased from $20 \%$ in 1994 to more than 24\% in 2006
- In FY 2006, the average size of an R01 with a female PI was $\$ 367,326$ in total costs and was about 2 percent larger than an R01 with a male PI
- Since 1998, the success rate for female applicants on new (Type 1) R01 grants has been slightly higher than that for male applicants
- Since 1998, the success rate for female applicants on renewal (Type 2) R01 grants has been on average 4\% below that of male applicants


## Involvement of Women in NIH Extramural Programs

Number of R01 Equivalent Awards to Women and Men with Percentage of Awards to Women, FY 1994-2006


## Involvement of Women in NIH Extramural Programs

Average Size of R01 Equivalent Grants (R01, R29, R37) Awards to Women and men Along with Women's Grants Expressed as a


NIH Competing and Non-Competing R01 Equivalent Awards, FY 1994-2006

| FY | All Awards |  |  | Awards to Women |  |  | Awards to Men |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Amount | Average | Number | Amount | Average | Number |  | Amount |  | Average |
| 1994 | 22,119 | \$ 4,594,420,345 | \$ 207,714 | 4,459 | \$ 908,825,603 | \$ 203,818 | 17,065 | \$ | 3,570,083,182 | \$ | 209,205 |
| 1995 | 21,738 | \$ 4,725,007,543 | \$ 217,362 | 4,548 | \$ 969,333,611 | \$ 213,134 | 16,741 | \$ | 3,662,349,605 | \$ | 218,765 |
| 1996 | 22,274 | \$ 5,055,448,406 | \$ 226,966 | 4,747 | \$1,054,086,080 | \$ 222,053 | 17,074 | \$ | 3,898,788,464 |  | 228,347 |
| 1997 | 23,152 | \$ 5,466,342,484 | \$ 236,107 | 4,947 | \$1,153,577,547 | \$ 233,187 | 17,747 | \$ | 4,207,081,064 |  | 237,059 |
| 1998 | 24,041 | \$ 5,919,656,552 | \$ 246,232 | 5,203 | \$1,253,466,964 | \$ 240,912 | 18,297 | \$ | 4,534,358,720 |  | 247,820 |
| 1999 | 25,682 | \$ 6,737,516,567 | \$ 262,344 | 5,665 | \$1,483,456,832 | \$ 261,864 | 19,471 |  | 5,112,753,237 |  | 262,583 |
| 2000 | 26,951 | \$ 7,615,901,117 | \$ 282,583 | 5,982 | \$1,703,234,283 | \$ 284,727 | 20,348 | \$ | 5,736,161,633 | \$ | 281,903 |
| 2001 | 27,992 | \$ 8,512,482,421 | \$ 304,104 | 6,269 | \$1,934,694,676 | \$ 308,613 | 21,019 | \$ | 6,366,531,472 |  | 302,894 |
| 2002 | 28,864 | \$ 9,361,124,010 | \$ 324,318 | 6,498 | \$2,139,052,481 | \$ 329,186 | 21,638 | \$ | 6,995,004,761 |  | 323,274 |
| 2003 | 29,619 | \$10,099,338,559 | \$ 340,975 | 6,825 | \$2,382,506,602 | \$ 349,085 | 22,057 | \$ | 7,474,464,773 |  | 338,870 |
| 2004 | 29,965 | \$10,554,069,482 | \$ 352,213 | 7,025 | \$2,518,741,382 | \$ 358,540 | 22,209 | \$ | 7,783,403,371 |  | 350,462 |
| 2005 | 29,549 | \$10,685,232,289 | \$ 361,611 | 7,066 | \$2,596,121,636 | \$ 367,410 | 21,841 | \$ | 7,862,105,334 |  | 359,970 |
| 2006 | 29,123 | \$10,522,350,609 | \$ 361,307 | 7,046 | \$2,588,180,178 | \$ 367,326 | 21,419 | \$ | 7,701,290,792 | \$ | 359,554 |

Data from IMPAC-2

## Involvement of Women in NIH Extramural Programs

Success Rates of Male vs. Female Applicants on New (Type 1) and Continuing (Type 2) NIH R01 Applications FY 1998-2006


Success Rate on NIH Competing R01 Applications by Gender of Principal Investigator

|  | Female Applicants |  |  |  |  |  | Male Applicants |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIH New (Type 1) Applications |  |  | NIH Continuing (Type 2) Applications |  |  | NIH New (Type 1) Applications |  |  | NIH Continuing (Type 2) Applications |  |  |
| FY | Base | Awards | Success Rate | Base | Awards | Success Rate | Base | Awards | Success Rate | Base | Awards | Success Rate |
| 1998 | 2,921 | 727 | 24.9\% | 993 | 423 | 42.6\% | 9,729 | 2,472 | 25.4\% | 3,653 | 1,817 | 49.7\% |
| 1999 | 3,874 | 980 | 25.3\% | 1,046 | 516 | 49.3\% | 11,835 | 3,126 | 26.4\% | 3,899 | 2,096 | 53.8\% |
| 2000 | 4,041 | 1066 | 26.4\% | 1,019 | 458 | 44.9\% | 12,062 | 3,213 | 26.6\% | 3,879 | 2,011 | 51.8\% |
| 2001 | 4,132 | 1046 | 25.3\% | 1,042 | 511 | 49.0\% | 11,998 | 3,118 | 26.0\% | 3,838 | 2,004 | 52.2\% |
| 2002 | 4,329 | 1006 | 23.2\% | 1,102 | 489 | 44.4\% | 12,133 | 3,062 | 25.2\% | 3,866 | 1,966 | 50.9\% |
| 2003 | 4,727 | 1187 | 25.1\% | 1,301 | 610 | 46.9\% | 13,550 | 3,267 | 24.1\% | 4,160 | 2,056 | 49.4\% |
| 2004 | 5,410 | 1099 | 20.3\% | 1,357 | 549 | 40.5\% | 15,195 | 3,057 | 20.1\% | 4,519 | 1,985 | 43.9\% |
| 2005 | 5,613 | 1036 | 18.5\% | 1,410 | 488 | 34.6\% | 15,572 | 2,798 | 18.0\% | 4,837 | 1,872 | 38.7\% |
| 2006 | 5,596 | 937 | 16.7\% | 1,485 | 489 | 32.9\% | 15,419 | 2,540 | 16.5\% | 4,991 | 1,712 | 34.3\% |

- How has the participation of women as Principal Investigators on NIH Research Project Grants (RPGs) and as reviewers changed over time?
- During the period since FY 1998, the amount awarded compared to the amount requested on RPG applications has remained about the same for male and female applicants.
- Over this same time period, women have requested between $83 \%$ and $96 \%$ of the amount requested by men.
- Over the period from FY 1985 to FY 2003, men generally have experienced higher success rates than women on RPG grant applications. During the period from FY 2003 to FY 2006 success rates have been almost equivalent.
- Over the period from FY 1980 to FY 2006 women have shown substantial gains in their share of all Research grant mechanisms including all career award, research project grants, SBIR/STTR awards and Research Centers.
- The proportion of women on Center for Scientific Review (CSR) initial review panels has remained higher than their proportion on R01 applications and has increased over the years since FY 2000.


## Involvement of Women in NIH Extramural Programs

## Amount of Competing Research Project Grant Awards as a Percentage of the Amount Requested, Women vs. Men FY 1998-2006



## Involvement of Women in NIH Extramural Programs



## Involvement of Women in NIH Extramural Programs

## Amounts Requested Compared to Amounts Award for NIH Competing Research Project Grants by Gender of the Principal Investigator, FY 1998-2006

|  | Awards to Female Principal Investigators |  |  |  | Awards to Male Principal Investigators |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Requested | Awarded | Awarded / Requested | Number | Requested | Awarded | Awarded / <br> Requested |
| FY | Total (Direct and Indirect) Cost |  |  |  |  |  |  |  |
| 1998 | 1,810 | \$ 463,307,934 | \$415,990,419 | 89.8\% | 5,759 | \$1,695,881,347 | \$1,498,526,256 | 4\% |
| 1999 | 2,060 | \$ 641,095,917 | \$561,420,818 | 87.6\% | 6,556 | \$2,250,694,818 | \$1,968,709,774 | 87.5\% |
| 2000 | 2,108 | \$ 703,507,310 | \$647,100,807 | 92.0\% | 6,642 | \$2,636,197,347 | \$2,317,382,683 | 87.9\% |
| 2001 | 2,253 | \$ 748,021,360 | \$683,487,035 | 91.4\% | 6,756 | \$2,592,821,848 | \$2,315,260,683 | 9.3\% |
| 2002 | 2,220 | \$ 750,171,536 | \$689,362,908 | 91.9\% | 6,958 | \$2,715,175,781 | \$2,463,865,525 | 90.7\% |
| 2003 | 2,712 | \$ 964,430,768 | \$853,638,581 | 88.5\% | 7,476 | \$2,988,323,830 | \$2,617,491,512 | 7.6\% |
| 2004 | 2,571 | \$ 907,273,643 | \$813,526,706 | 89.7\% | 7,359 | \$3,033,352,085 | \$2,706,386,683 | 89.2\% |
| 2005 | 2,556 | \$ 908,319,052 | \$807,980,850 | 89.0\% | 6,893 | \$2,948,426,839 | \$2,604,623,041 | 88.3\% |
| 2006 | 2,354 | \$1,030,200,769 | \$836,382,462 | 81.2\% | 6,465 | \$2,970,790,771 | \$2,457,635,922 | $82.7 \%$ |

Source: IMPAC-II Publication files as of April 5, 2007 Program gend_070405_rfm

## Involvement of Women in NIH Extramural Programs

## Success Rates for Women and Men on Competing RPG <br> Applications <br> FY 1985-2006



## Success Rates for Women and Men on NIH Competing Research Project Grant Applications, FY 1985-2006

|  | Applications from Women |  | Applications from Men |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| FY | Reviewed | Awarded |  | Success | Reviewed |  | Awarded |
| 1985 | 3,174 | 970 | $30.6 \%$ | Success |  |  |  |
| 1986 | 3,291 | 1,053 | $32.0 \%$ | 16,217 | 5,567 | $34.3 \%$ |  |
| 1987 | 3,413 | 1,101 | $32.3 \%$ | 15,656 | 5,240 | $33.5 \%$ |  |
| 1988 | 3,770 | 1,155 | $30.6 \%$ | 15,113 | 5,648 | $37.4 \%$ |  |
| 1989 | 3,847 | 1,105 | $28.7 \%$ | 15,978 | 5,274 | $33.0 \%$ |  |
| 1990 | 4,051 | 1,024 | $25.3 \%$ | 15,939 | 4,626 | $29.0 \%$ |  |
| 1991 | 4,078 | 1,140 | $28.0 \%$ | 16,581 | 4,135 | $24.9 \%$ |  |
| 1992 | 4,364 | 1,244 | $28.5 \%$ | 16,512 | 4,889 | $29.6 \%$ |  |
| 1993 | 5,207 | 1,207 | $23.2 \%$ | 16,602 | 5,005 | $30.1 \%$ |  |
| 1994 | 5,741 | 1,380 | $24.0 \%$ | 17,656 | 4,262 | $24.1 \%$ |  |
| 1995 | 5,680 | 1,453 | $25.6 \%$ | 19,042 | 5,003 | $26.3 \%$ |  |
| 1996 | 5,455 | 1,425 | $26.1 \%$ | 18,838 | 5,200 | $27.6 \%$ |  |
| 1997 | 5,649 | 1,684 | $29.8 \%$ | 17,615 | 5,098 | $28.9 \%$ |  |
| 1998 | 5,411 | 1,628 | $30.1 \%$ | 17,624 | 5,534 | $31.4 \%$ |  |
| 1999 | 5,970 | 1,870 | $31.3 \%$ | 17,074 | 5,535 | $32.4 \%$ |  |
| 2000 | 6,366 | 1,940 | $30.5 \%$ | 18,379 | 6,259 | $34.1 \%$ |  |
| 2001 | 6,806 | 2,129 | $31.3 \%$ | 19,180 | 6,372 | $33.2 \%$ |  |
| 2002 | 7,365 | 2,128 | $28.9 \%$ | 19,684 | 6,558 | $33.3 \%$ |  |
| 2003 | 8,697 | 2,625 | $30.2 \%$ | 20,730 | 6,792 | $32.8 \%$ |  |
| 2004 | 10,603 | 2,529 | $23.9 \%$ | 23,946 | 7,302 | $30.5 \%$ |  |
| 2005 | 11,377 | 2,528 | $22.2 \%$ | 28,891 | 7,289 | $25.2 \%$ |  |
| 2006 | 11,638 | 2,332 | $20.0 \%$ | 30,014 | 6,826 | $22.7 \%$ |  |
|  |  |  |  | 30,801 | 6,398 | $20.8 \%$ |  |

[^1]
## Involvement of Women in NIH Extramural Programs

Female Investigators as a Percent of Total Awards by Award Mechanism FY 1980-2005


Fiscal Year

## Involvement of Women in NIH Extramural Programs

Percentage of Women on Standing CSR Peer Review Panels Compared to the Percentage of Women as Applicants for NIH R01 Grants



[^0]:    gender_training_060929_fy2006_fm

[^1]:    Source: Success rate file, CGAF2004 and IMPAC-II as of September 20, 2005
    Program: SRF_Gender_050921_rtm
    Excludes applicātions without cō̄ed Genders

