Extramurally-Funded Sponsored Projects to Support Fellowship and Career Development Activities: Best Practices for Competitive Applications

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Course: "Funding and Grantsmanship for Research and Career Development Activities"

http://grantscourse.columbia.edu/

Course Policies:

Please, No:

- Recording of Presentation
- Screen Shots of Presentation
- Posting to Social Media
- Sharing of Course Material with those Outside of Course

Thanks, Jaime Rubin

Topics to be Discussed

- **Individual Fellowship Programs**
  - Overview of Programs and Funding Agencies
  - NIH Review Process, Criteria, and Scoring System
  - Components of an NIH Application
- **Career Transition Funding Programs**
- **Junior Faculty Career Development Programs**
  - Overview of Programs and Funding Agencies
  - NIH Review Process, Criteria, and Scoring System
  - Components of an NIH Application

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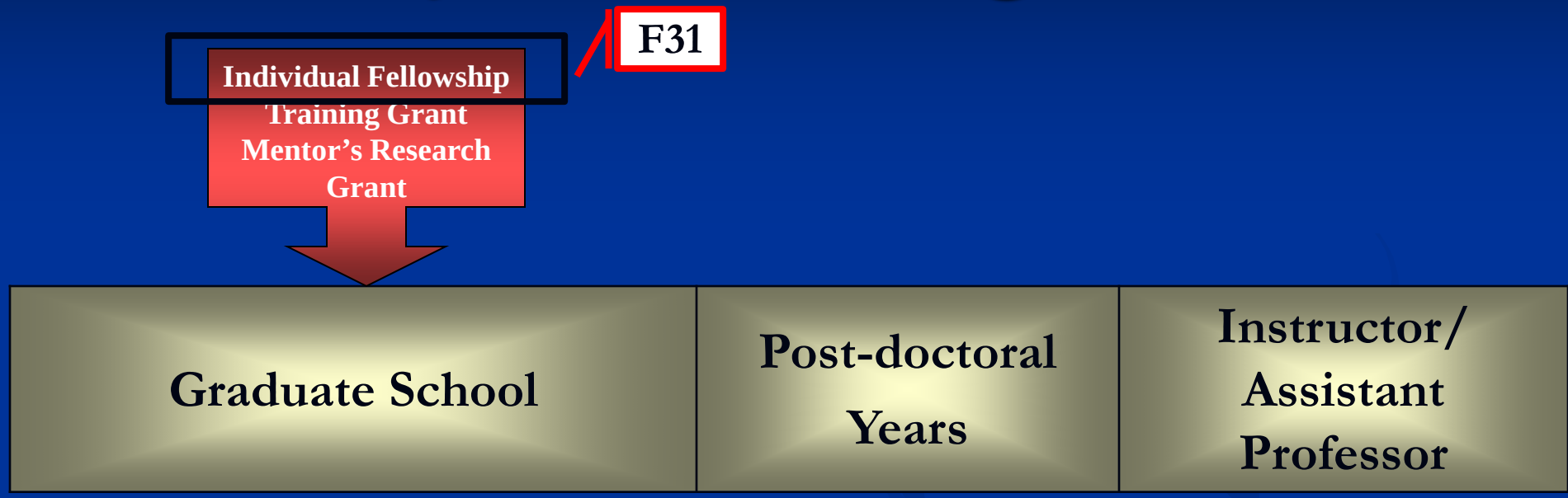
Not All Funding Opportunities Are the Same

- Different mission statements
  - **Fellowships**
  - Career development (K's)/ Scholar awards
  - Research project (R's)
- Different funding
  - Stipend/Salary
  - Pilot awards vs. Comprehensive research costs
- Different time frames
  - Not renewable: e.g., 5 years (K's), **3 years (F's),** 2 years (T's)
  - Renewable: 4years-5years (R01) each competitive period

Timeline of NIH Funding for Junior Investigators



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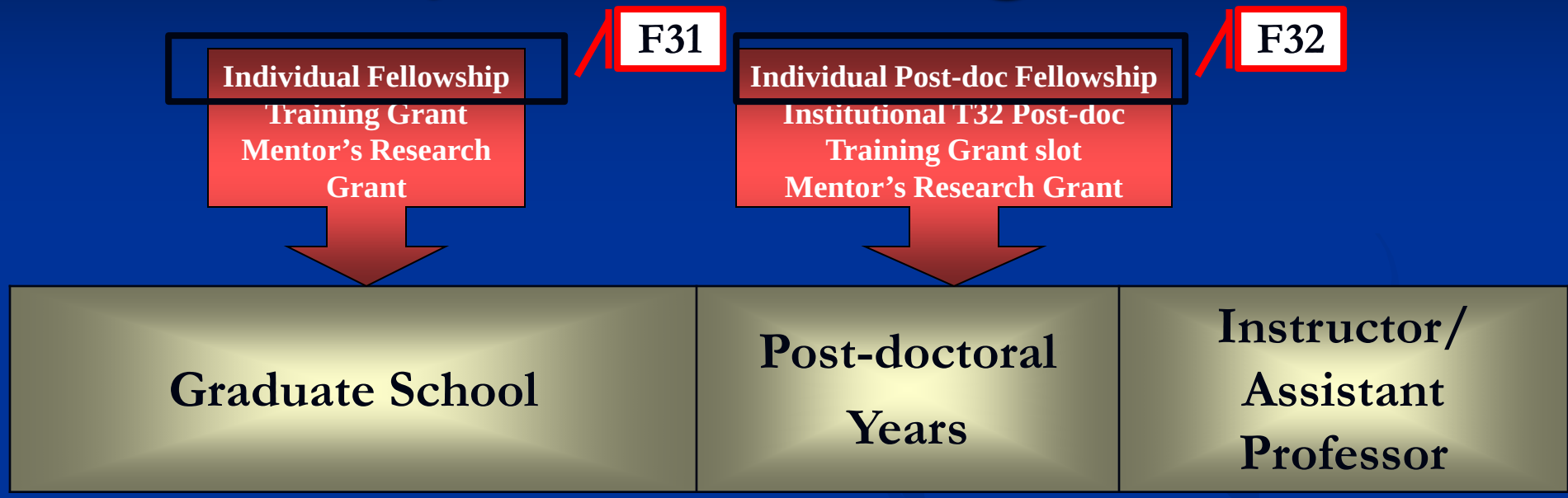

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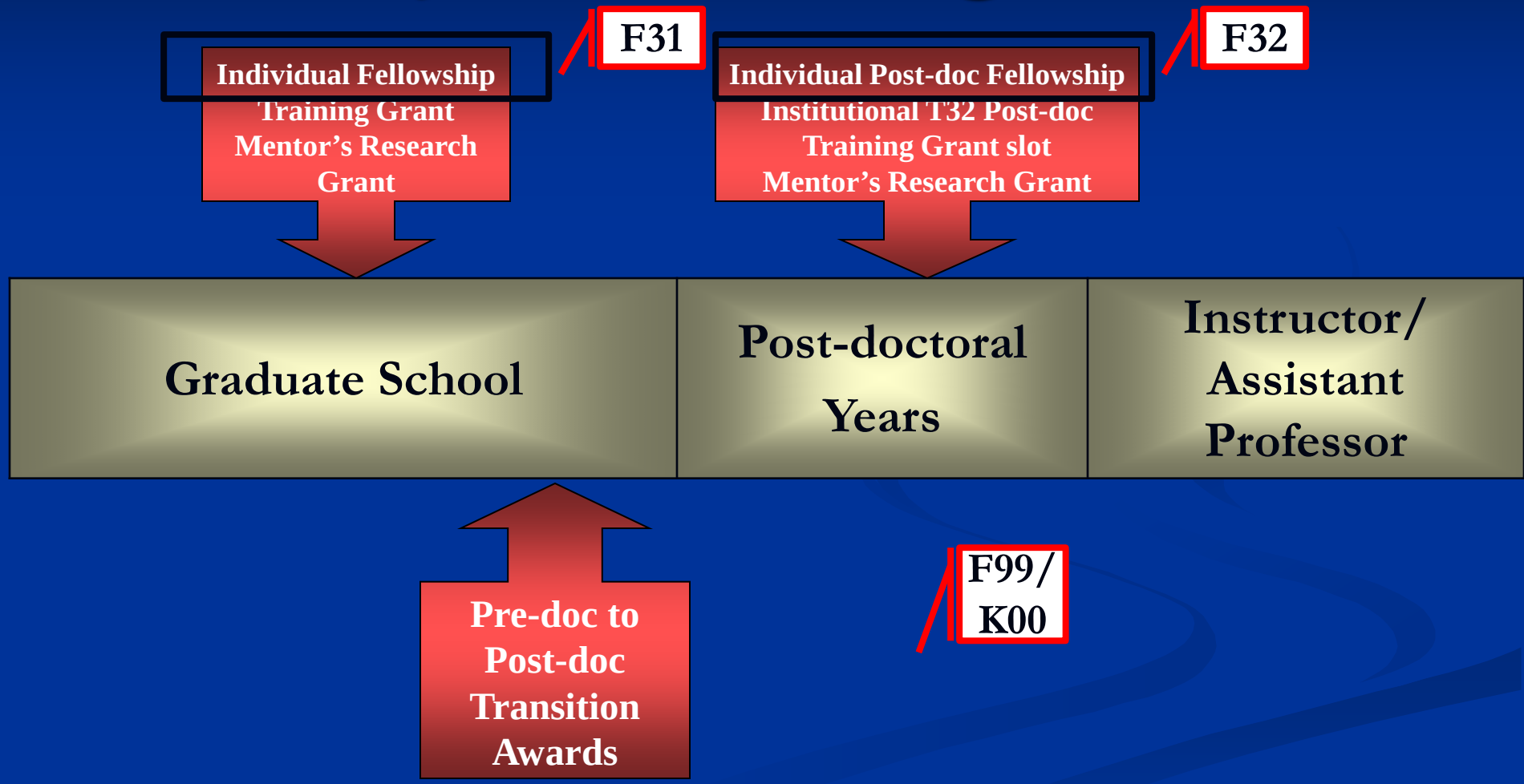

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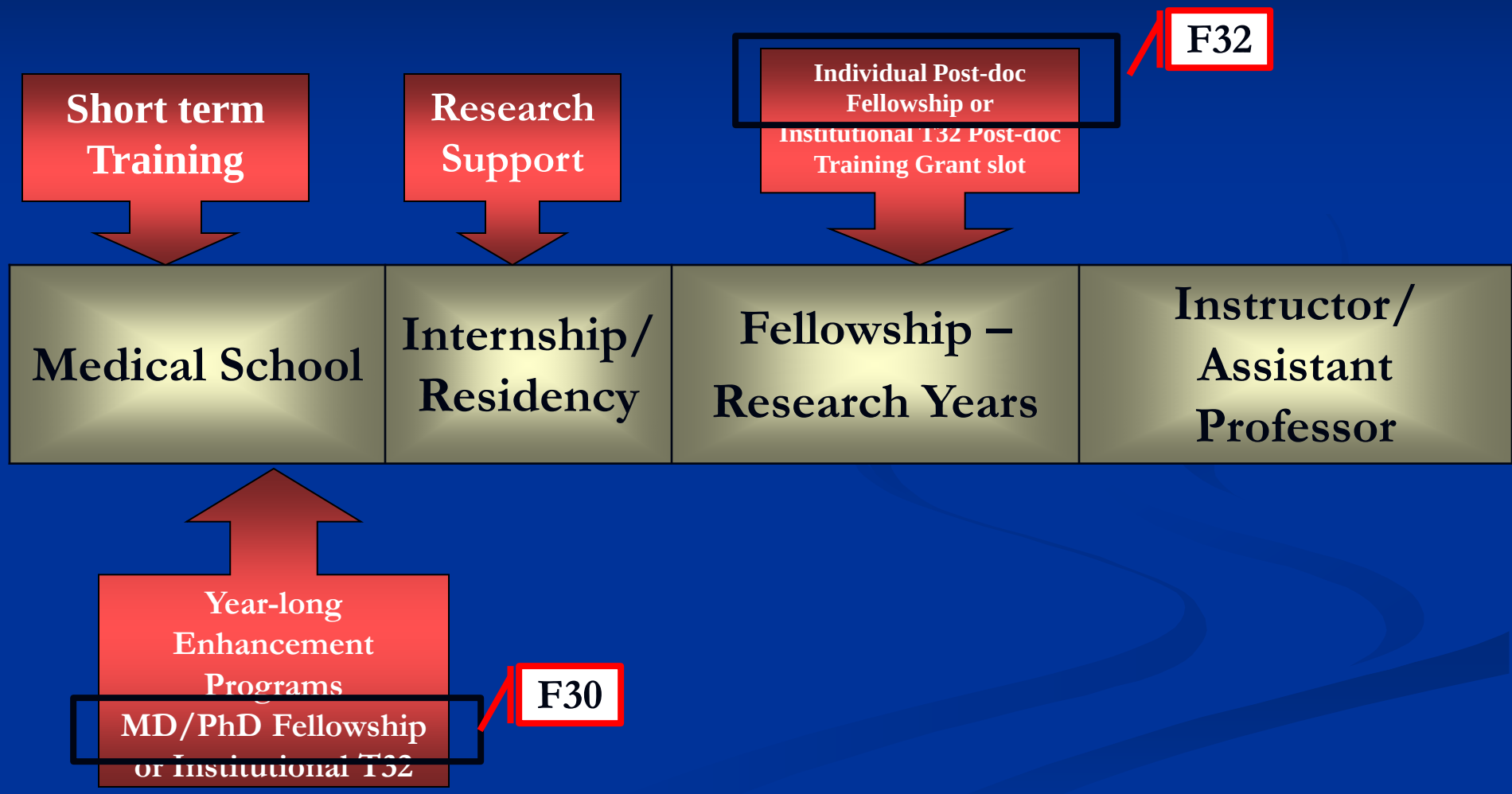


National Institutes of Health
Research Training and Career Developm

Home | Career Path | Training | Fellowships

Individual Fellowships

F30

Ruth L. Kirschstein Individual Predoctoral NRSA for MD/ PhD and other Dual Degree Fellowships

Individual fellowships for predoctoral training which leads to the combined MD/PhD and other dual Clinical/Research degrees.

Details | View Current Funding Opportunities

F31

Ruth L. Kirschstein Predoctoral Individual National Research Service Award

To provide predoctoral individuals with supervised research training in specified health and health-related areas leading toward the research doctoral degree (e.g., PhD).

Details | View Current Funding Opportunities

F32

Ruth L. Kirschstein Postdoctoral Individual National Research Service Award

To provide postdoctoral research training to individuals to broaden their scientific background and extend their potential for research in specified health-related areas.

Details | View Current Funding Opportunities

National Institutes of Health
Research Training and Career Development

Home | Career Path | Programs

Training | Fellowships

Individual Fellowships

F31

Ruth L. Kirschstein Predoctoral Individual National Research Service Award

To provide predoctoral individuals with supervised research training in specified health and health-related areas leading toward the research doctoral degree (e.g., PhD).

Details | *View Current Funding Opportunities*

- Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship (Parent F31)
- Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (Parent F31)

Parent Announcements (

Activity Code(s)	Title	Announcement Number
F30	Ruth L. Kirschstein National Research Service Award (NRSA) Individual Fellowship for Students at Institutions Without NIH-Funded Institutional Predoctoral Dual-Degree Training Programs (Parent F30)	PA-23-261
F30	Ruth L. Kirschstein National Research Service Award (NRSA) Individual Fellowship for Students at Institutions with NIH-Funded Institutional Predoctoral Dual-Degree Training Programs (Parent F30)	PA-23-260
F31	Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (Parent F31-Diversity)	PA-23-271
F31	Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship (Parent F31)	PA-23-272
F32	Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship (Parent F32)	PA-23-262

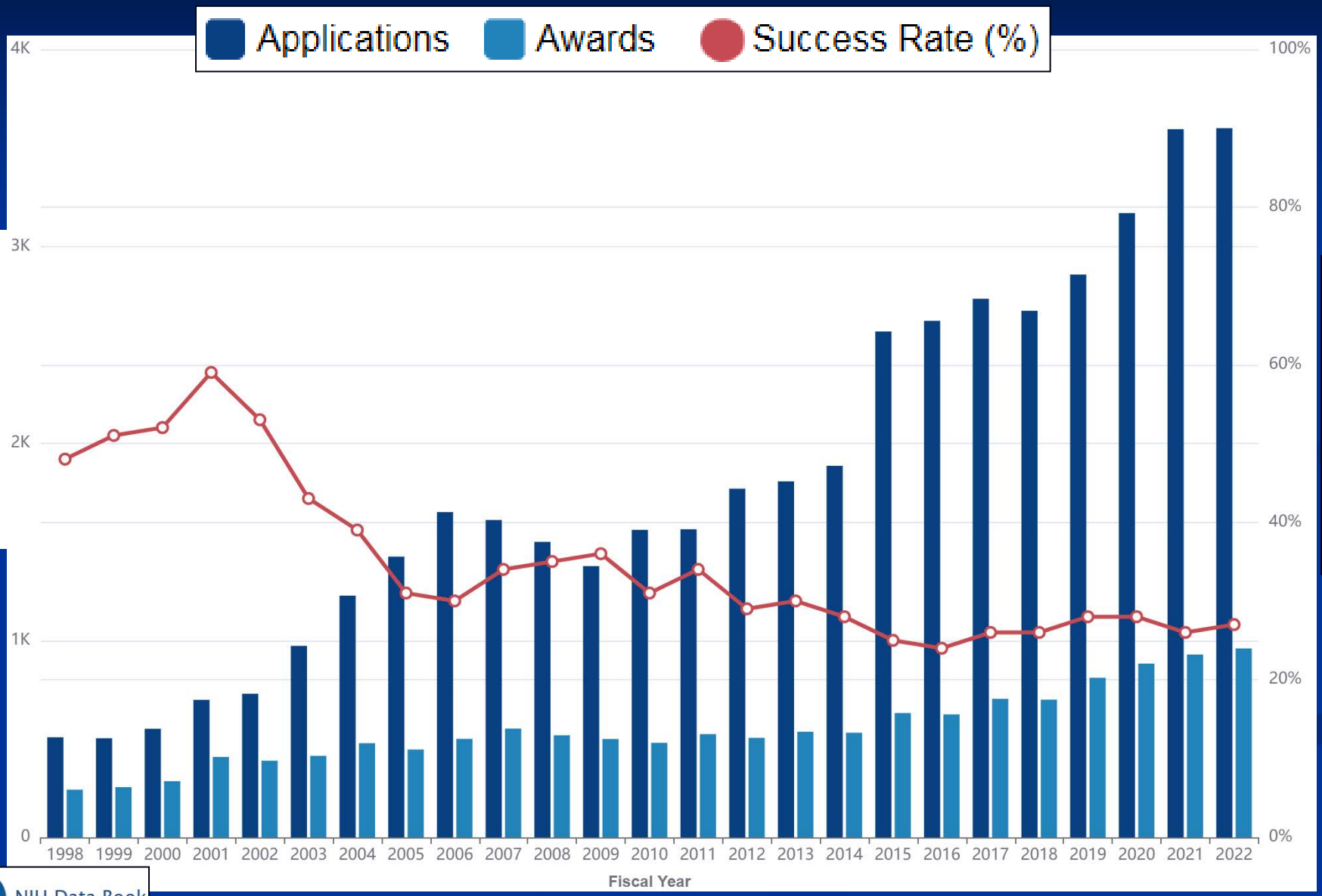
https://grants.nih.gov/grants/guide/parent_announcements.php#fel

Fellowship Programs

Predoctoral Individual National Research Service Award (F31)

- Supports specific individual in research degree program (e.g., PhD candidate)
- Stipend, tuition, institutional allowance (e.g., health fees, travel), childcare
- Review criteria:
  - Individual fellow
  - Mentor
  - Research project
  - Research training/Career Development environment

Pre-doc Fellowships (F31's)
Applications, awards, and success rates



NIH Data Book

Pre-doc Fellowships (F31's) Applications, awards, and success rates

Fiscal Year	Activity Code	NIH Institute/Center	Number of Applications Reviewed	Number of Applications Awarded	Success Rate[1]	Total Funding[2]
2022	F31	NCCIH**	16	6	37.5%	$234,571
2022	F31	NCI	533	94	17.6%	$3,852,536
2022	F31	NEI	67	21	31.3%	$859,540
2022	F31	NHGRI	16	5	31.3%	$208,338
2022	F31	NHLBI	306	123	40.2%	$5,109,422
2022	F31	NIA	240	65	27.1%	$2,699,536
2022	F31	NIAAA	73	41	56.2%	$1,701,249
2022	F31	NIAID	481	73	15.2%	$2,991,113
2022	F31	NIAMS	114	22	19.3%	$917,317
2022	F31	NIBIB	9	3	33.3%	$134,139
2022	F31	NICHD	265	73	27.5%	$2,978,051
2022	F31	NIDA	128	50	39.1%	$2,089,188
2022	F31	NIDCD	88	37	42.0%	$1,549,623
2022	F31	NIDCR	44	26	59.1%	$1,054,724
2022	F31	NIDDK	210	50	23.8%	$2,003,131
2022	F31	NIEHS	60	14	23.3%	$583,465
2022	F31	NIGMS	115	36	31.3%	$1,471,790
2022	F31	NIMH	289	74	25.6%	$3,040,710
2022	F31	NIMHD	28	12	42.9%	$496,586
2022	F31	NINDS	463	112	24.2%	$4,672,977
2022	F31	NINR	46	21	45.7%	$896,711
2022	F31	NLM	9	1	11.1%	$46,752
2022	**F31**	**ACTIVITY TOTAL**	**3,600**	**959**	**26.6%**	**$39,591,469**

https://report.nih.gov/success_rates/index.aspx

Pre-doc Fellowships (F31's) Applications, awards, and success rates

Fiscal Year	Activity Code	NIH Institute/Center	Number of Applications Reviewed	Number of Applications Awarded	Success Rate[1]	Total Funding[2]
2013	F31	NIDDK	29	9	31.0%	$312,742
2014	F31	NIDDK	51	15	29.4%	$490,924
2015	F31	NIDDK	137	45	32.8%	$1,660,371
2016	F31	NIDDK	152	36	23.7%	$1,285,280
2017	F31	NIDDK	162	43	26.5%	$1,653,871
2018	F31	NIDDK	172	53	30.8%	$1,993,026
2019	F31	NIDDK	189	55	29.1%	$2,190,246
2020	F31	NIDDK	176	60	34.1%	$2,313,659
2021	F31	NIDDK	203	48	23.6%	$1,948,931
2022	F31	NIDDK	210	50	23.8%	$2,003,131

Success Rates https://report.nih.gov/success_rates/index.aspx

American Heart Association Predoctoral Fellowship Program

- "global cardiovascular, cerebrovascular and brain health"
- Enrolled in a "PhD, MD, DO, DVM, PharmD, DDS, DrPH, or PhD in nursing, public health, or equivalent clinical health science doctoral student"
- Funding: Stipend (NIH rate), Health insurance, Project support
- Award Duration: 1-2 years
- Application components similar to NIH – e.g., Letters of Reference, Biosketches,
- Review criteria similar to NIH – Applicant, Mentor/Training Plan, Proposal. Environment
- US citizenship/Permanent Residency not required

https://professional.heart.org/en/research-programs/application-information

Predoctoral MD/PhD or Other Dual-Doctoral Degree Fellowship (F30)

- Supports specific individual - dual degree candidate: health professional doctoral degree (e.g., MD, DDS) and a research doctoral degree (e.g., PhD, DrPH)
- Stipend, tuition, institutional allowance (e.g., health fees, travel), childcare
- Review criteria:
  - Individual fellow
  - Mentor
  - Research project
  - Research training/Career Development environment

Predoctoral to Postdoctoral Fellow Transition Award (F99/K00)

- Facilitates "the transition of talented graduate students into successful research postdoctoral appointments"
- F99: 1-2 years of support to complete graduate (Ph.D.) research
- K00: 3-4 years of support for mentored postdoctoral research training and career development activities

Pre-doc to Post-doc Transition Awards (F99's) Applications, awards, and success rates

Fiscal Year	Activity Code	NIH Institute/Center	Number of Applications Reviewed	Number of Applications Awarded	Success Rate[1]	Total Funding[2]
2016	F99	NCI	76	36	47.4%	$1,391,380
2016	**F99**	**ACTIVITY TOTAL**	**76**	**36**	**47.4%**	**$1,391,380**
2017	F99	NCI	90	27	30.0%	$1,025,370
2017	F99	NINDS	29	12	41.4%	$394,321
2017	**F99**	**ACTIVITY TOTAL**	**119**	**39**	**32.8%**	**$1,419,691**
2018	F99	NCI	73	23	31.5%	$907,420
2018	F99	NINDS	40	18	45.0%	$689,588
2018	**F99**	**ACTIVITY TOTAL**	**113**	**41**	**36.3%**	**$1,597,008**
2019	F99	NCI	70	26	37.1%	$1,069,791
2019	F99	NIA	0	0	0.0%	$28,600
2019	F99	NIDDK	5	1	20.0%	$46,516
2019	F99	NINDS	36	21	58.3%	$789,490
2019	**F99**	**ACTIVITY TOTAL**	**111**	**48**	**43.2%**	**$1,934,397**
2020	F99	NCI	63	26	41.3%	$1,080,498
2020	F99	NIA	39	15	38.5%	$618,707
2020	F99	NIDDK	4	3	75.0%	$127,092
2020	F99	NINDS	26	16	61.5%	$620,764
2020	**F99**	**ACTIVITY TOTAL**	**132**	**60**	**45.5%**	**$2,447,061**
2021	F99	NCI	66	24	36.4%	$996,134
2021	F99	NIA	39	8	20.5%	$344,881
2021	F99	NIAAA	0	0	0.0%	$42,800
2021	F99	NIDCR	4	2	50.0%	$85,160
2021	F99	NIDDK	3	2	66.7%	$85,459
2021	F99	NINDS	59	43	72.9%	$1,654,540
2021	**F99**	**ACTIVITY TOTAL**	**171**	**79**	**46.2%**	**$3,208,974**
2022	F99	NCI	55	27	49.1%	$1,102,398
2022	F99	NHGRI	3	2	66.7%	$80,514
2022	F99	NIA	20	8	40.0%	$335,414
2022	F99	NIDDK	1	0	0.0%	$0
2022	F99	NINDS	62	35	56.5%	$1,481,371
2022	**F99**	**ACTIVITY TOTAL**	**141**	**72**	**51.1%**	**$2,999,697**

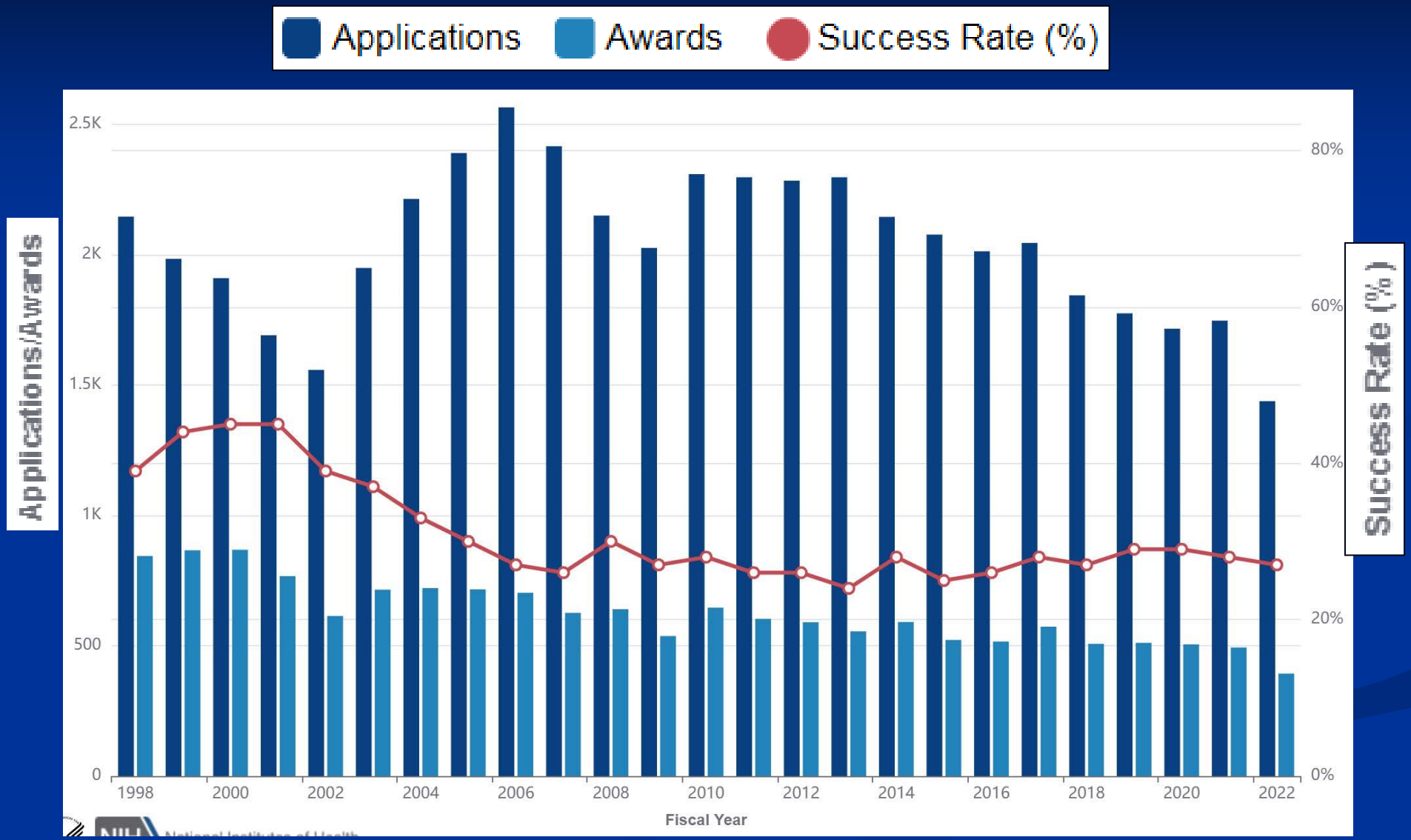
Success Rates

https://report.nih.gov/success_rates/index.aspx

Postdoctoral Individual National Research Service Award (F32)

- Supports specific individual (e.g., PhD, MD, or MD/PhD trained)
- May be in degree program
- Stipend, tuition, institutional allowance (e.g., health fees, travel), childcare
- Review criteria:
  - Individual fellow
  - Mentor
  - Research project
  - Research training/Career Development environment

Post-doc Fellowships (F32's)
Applications, awards, and success rates



NIH Data Book

Pre-doc Fellowships (F32's) Applications, awards, and success rates

Fiscal Year	Activity Code	NIH Institute/Center	Number of Applications Reviewed	Number of Applications Awarded	Success Rate[1]	Total Funding[2]
2022	F32	NCCIH**	3	1	33.3%	$69,290
2022	F32	NCI	144	22	15.3%	$1,504,817
2022	F32	NEI	34	14	41.2%	$951,452
2022	F32	NHGRI	3	2	66.7%	$137,864
2022	F32	NHLBI	161	58	36.0%	$4,284,620
2022	F32	NIA	90	27	30.0%	$1,863,276
2022	F32	NIAAA	20	12	60.0%	$837,307
2022	F32	NIAID	184	16	8.7%	$1,117,433
2022	F32	NIAMS	28	6	21.4%	$373,199
2022	F32	NIBIB	6	0	0.0%	$0
2022	F32	NICHD	100	33	33.0%	$2,321,816
2022	F32	NIDA	31	17	54.8%	$1,172,958
2022	F32	NIDCD	41	20	48.8%	$1,384,870
2022	F32	NIDCR	17	6	35.3%	$416,640
2022	F32	NIDDK	112	27	24.1%	$1,897,435
2022	F32	NIEHS	15	4	26.7%	$280,568
2022	F32	NIGMS	246	76	30.9%	$5,067,123
2022	F32	NIMH	104	25	24.0%	$1,714,517
2022	F32	NIMHD	11	5	45.5%	$366,274
2022	F32	NINDS	83	20	24.1%	$1,402,978
2022	F32	NINR	5	2	40.0%	$139,664
2022	**F32**	**ACTIVITY TOTAL**	**1,438**	**393**	**27.3%**	**$27,304,101**

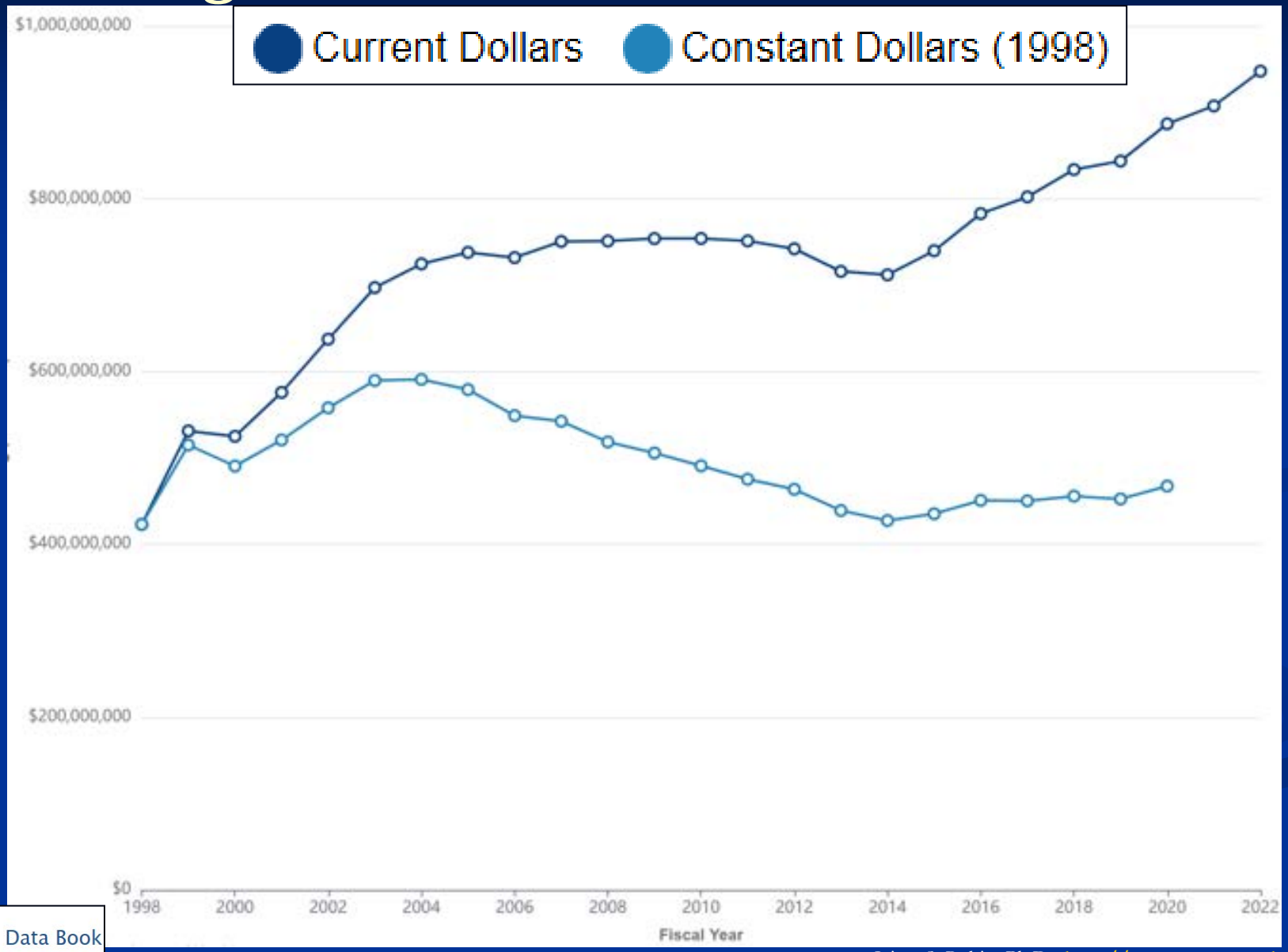
Post-doc Fellowships (F32's) Applications, awards, and success rates

Fiscal Year	Activity Code	NIH Institute/Center	Number of Applications Reviewed	Number of Applications Awarded	Success Rate[1]	Total Funding[2]
2013	F32	NIDDK	176	49	27.8%	$2,627,518
2014	F32	NIDDK	186	73	39.2%	$4,118,351
2015	F32	NIDDK	163	47	28.8%	$2,672,454
2016	F32	NIDDK	174	58	33.3%	$3,441,218
2017	F32	NIDDK	183	47	25.7%	$2,875,720
2018	F32	NIDDK	153	46	30.1%	$2,923,665
2019	F32	NIDDK	136	45	33.1%	$2,873,899
2020	F32	NIDDK	140	37	26.4%	$2,603,469
2021	F32	NIDDK	138	40	29.0%	$2,856,930
2022	F32	NIDDK	112	27	24.1%	$1,897,435

Post-doc Fellowships (F32's) Applications, awards, and success rates, by degree of applicant

Fiscal Year	Fellow Degree[1]	Number of Applications Reviewed	Number of Applications Awarded[2]	Success Rate[3]
2022	MD	106	29	27.4%
2022	PhD	1,067	303	28.4%
2022	MD-PhD	42	15	35.7%
2022	Other	223	46	20.6%
2022	**TOTAL**	**1,438**	**393**	**27.3%**

NRSA Training Grants and Fellowships: Funding in Current and Constant Dollars



NIH Data Book

Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2023

Notice Number:

NOT-OD-23-076

Predoctoral Trainees and Fellows: For institutional training grants (T32, T35, T90, TL1) and individual fellowships (F30, F31), one stipend level is used for all predoctoral candidates, regardless of the level of experience.

Career Level	Years of Experience	Stipend for FY 2023	Monthly Stipend
Predoctoral	All	$27,144	$2,262

Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2023

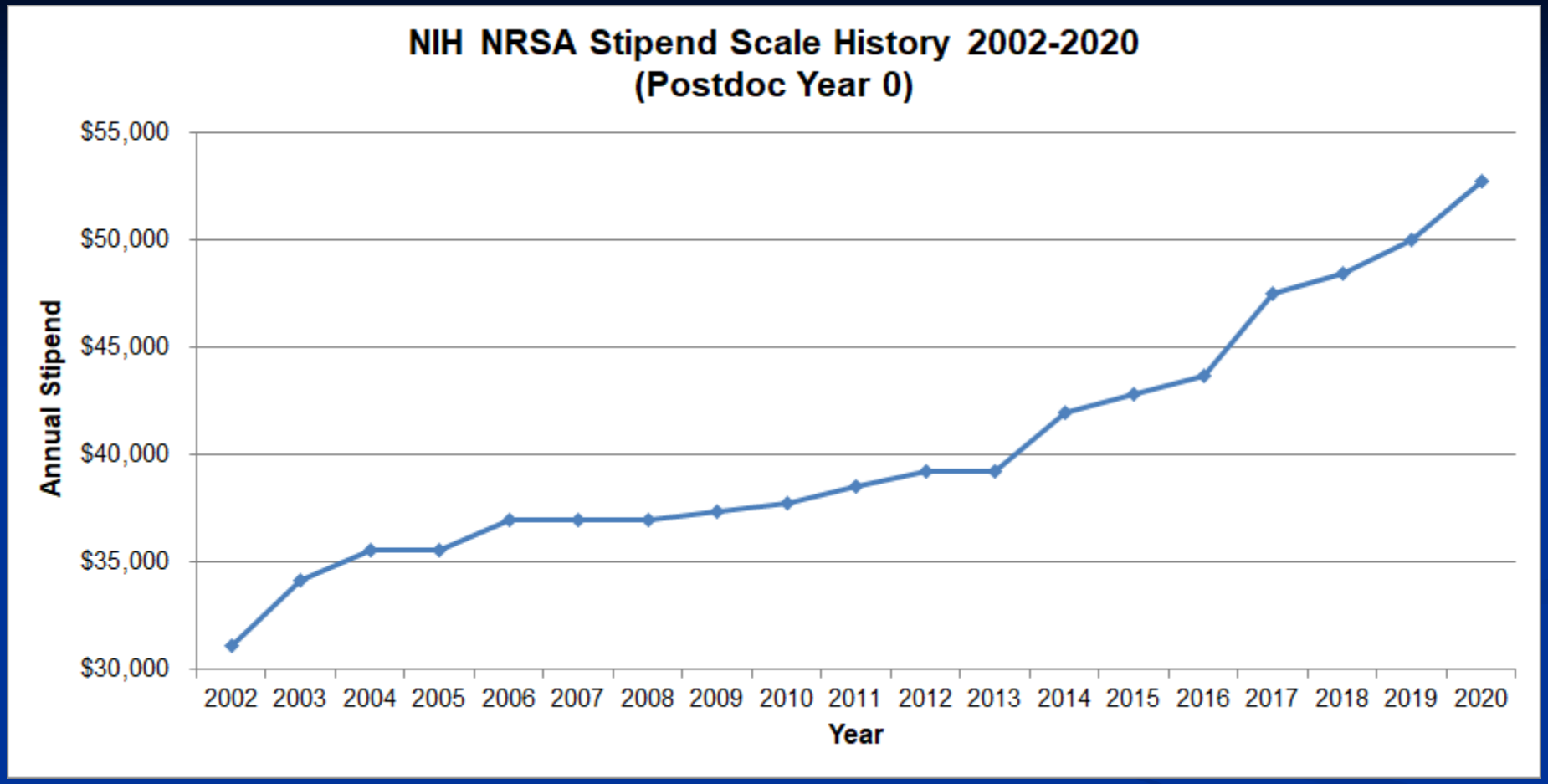
Notice Number:

NOT-OD-23-076

Postdoctoral Trainees and Fellows:

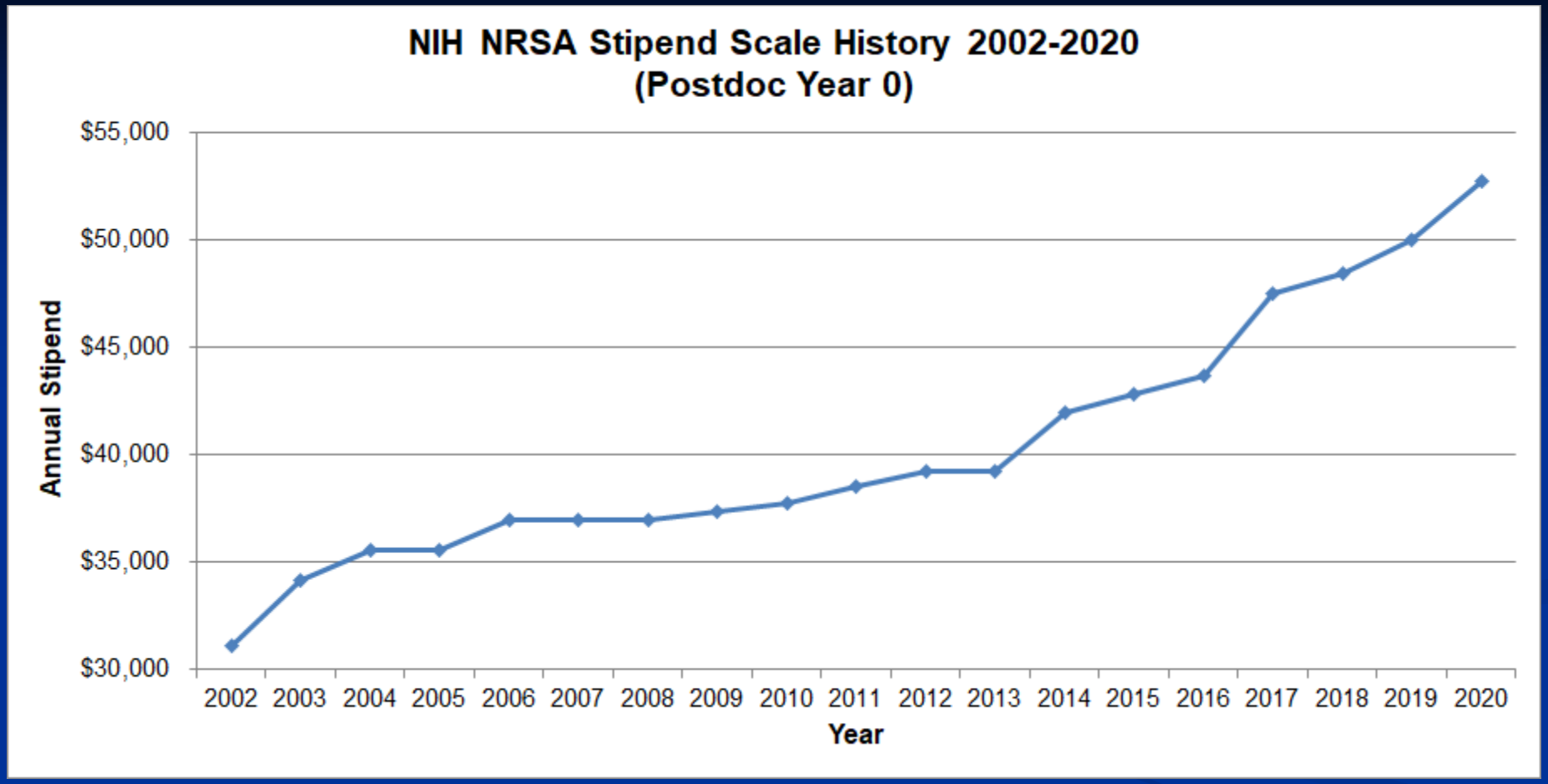
Career Level	Years of Experience	Stipend for FY 2023	Monthly Stipend
Postdoctoral	0	$56,484	$4,707
Postdoctoral	1	$56,880	$4,740
Postdoctoral	2	$57,300	$4,775
Postdoctoral	3	$59,592	$4,966
Postdoctoral	4	$61,572	$5,131
Postdoctoral	5	$63,852	$5,321
Postdoctoral	6	$66,228	$5,519
Postdoctoral	7 or More	$68,604	$5,717

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-23-076.html



NATIONAL POSTDOCTORAL ASSOCIATION

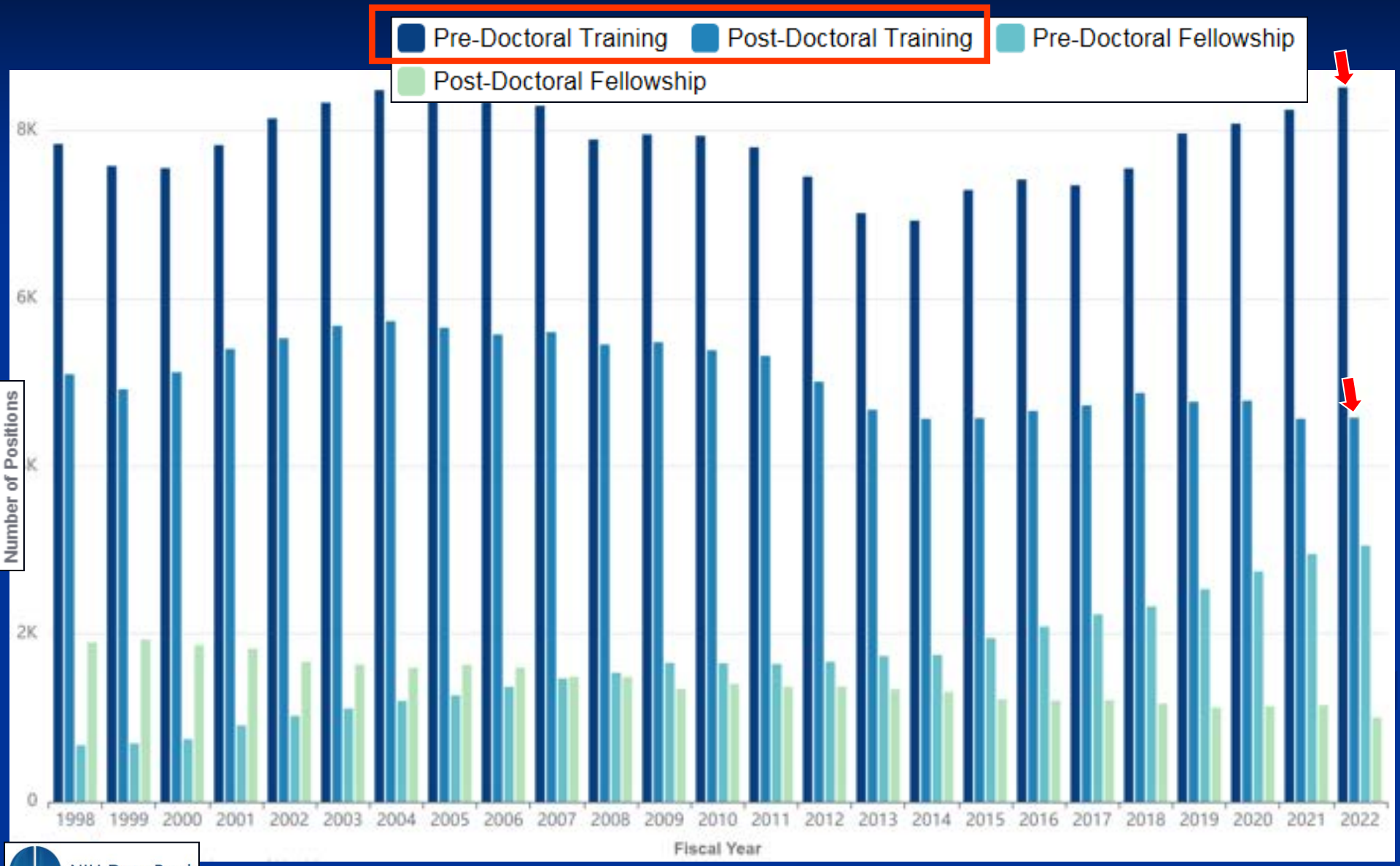
https://www.nationalpostdoc.org/news/news.asp?id=489379



NATIONAL POSTDOCTORAL ASSOCIATION

https://www.nationalpostdoc.org/news/news.asp?id=489379

Training Grants and Fellowships: Pre- and Post-Doctoral Positions



NIH Data Book

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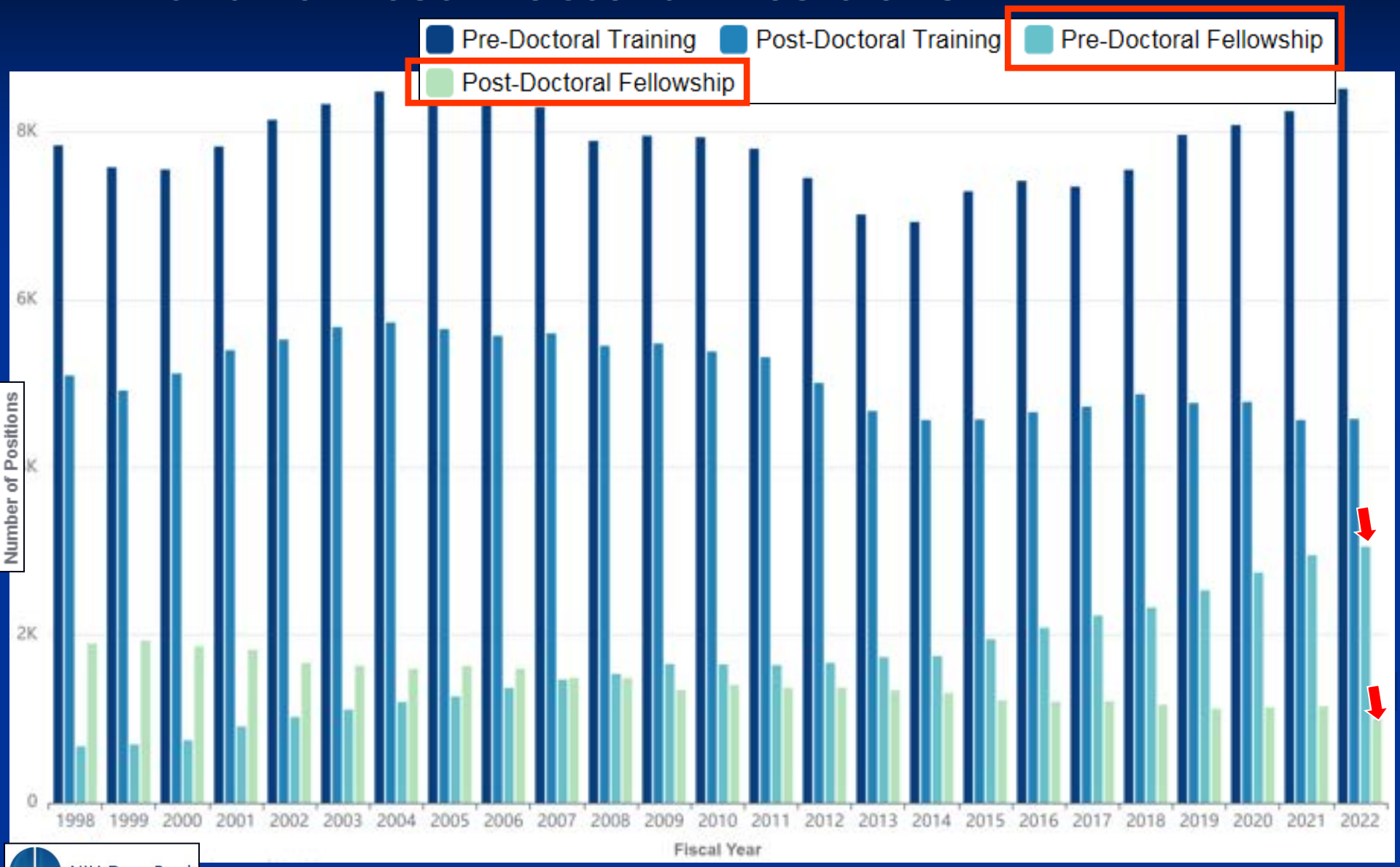
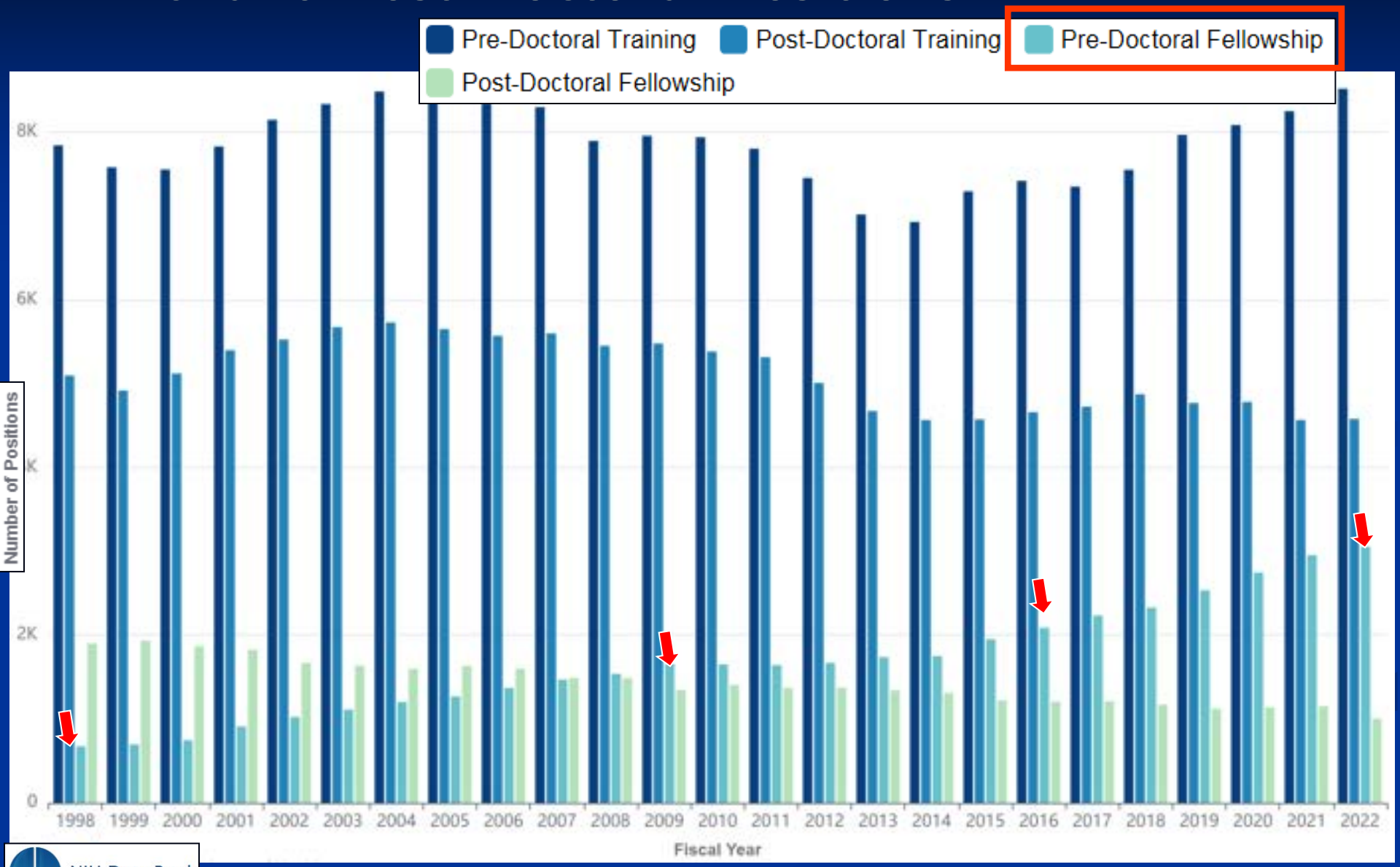


NIH Data Book

Training Grants and Fellowships: Pre- and Post-Doctoral Positions



NIH Data Book

Biomedical Workforce Task Force

Improving graduate student and postdoctoral training

- **A. Put individual development plans in place for all trainees**
- **B. Reduce the length of graduate training**
- **C. Provide F30 and F31 awards from all Institutes/Centers**
- **D. Increase postdoctoral stipends and consider policies on benefits**
- E. Increase support for K99/R00 and shorten eligibility period
- F. Increase support for Early Independence Awards

http://acd.od.nih.gov/bwf.htm

Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship (Parent F31)

National Eye Institute (NEI)

National Heart, Lung, and Blood Institute (NHLBI)

National Human Genome Research Institute (NHGRI)

National Institute on Aging (NIA)

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

National Institute of Allergy and Infectious Diseases (NIAID)

National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)

Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)

National Institute on Deafness and Other Communication Disorders (NIDCD)

National Institute of Dental and Craniofacial Research (NIDCR)

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

National Institute on Drug Abuse (NIDA)

National Institute of Environmental Health Sciences (NIEHS)

National Institute of Mental Health (NIMH)

National Institute of Neurological Disorders and Stroke (NINDS)

National Institute of Nursing Research (NINR)

National Institute on Minority Health and Health Disparities (NIMHD)

National Library of Medicine (NLM)

National Center for Complementary and Integrative Health (NCCIH)

National Cancer Institute (NCI)

Notice of Funding Opportunity (NOFO) Number

PA-23-272

Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (Parent F31-Diversity)

NATIONAL INSTITUTES OF HEALTH (NIH)

National Eye Institute (NEI)

National Heart, Lung, and Blood Institute (NHLBI)

National Human Genome Research Institute (NHGRI)

National Institute on Aging (NIA)

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

National Institute of Allergy and Infectious Diseases (NIAID)

National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)

National Institute of Biomedical Imaging and Bioengineering (NIBIB)

Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)

National Institute on Deafness and Other Communication Disorders (NIDCD)

National Institute of Dental and Craniofacial Research (NIDCR)

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

National Institute on Drug Abuse (NIDA)

National Institute of Environmental Health Sciences (NIEHS)

National Institute of General Medical Sciences (NIGMS)

National Institute of Mental Health (NIMH)

National Institute of Neurological Disorders and Stroke (NINDS)

National Institute of Nursing Research (NINR)

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Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (Parent F31-Diversity)

Notice of Funding Opportunity (NOFO) Number

PA-23-271

"Eligible Individuals (Program Director/Principal Investigator)
Any individual(s) with the skills, knowledge, and resources necessary to carry out the proposed research as the Program Director(s)/Principal Investigator(s) (PD(s)/PI(s)) is invited to work with their organization to develop an application for support. Individuals from diverse backgrounds, including underrepresented racial and ethnic groups, individuals with disabilities, and women are always encouraged to apply for NIH support. See, Reminder: Notice of NIH's Encouragement of Applications Supporting Individuals from Underrepresented Ethnic and Racial Groups as well as Individuals with Disabilities, NOT-OD-22-019".

https://grants.nih.gov/grants/guide/pa-files/PA-23-271.html

Reminder: Notice of NIH's Encouragement of Applications Supporting Individuals from Underrepresented Ethnic and Racial Groups as well as Individuals with Disabilities

Notice Number:

NOT-OD-22-019

"On November 22, 2019, NIH issued its latest Notice of Interest in Diversity, [NOT-OD-20-031] explaining NIH's compelling interest in supporting a diverse biomedical research workforce that includes individuals from groups that are currently underrepresented in the biomedical, clinical, behavioral and social sciences, such as individuals from racial and ethnic groups that have been shown by the National Science Foundation to be underrepresented in health-related sciences on a national basis, individuals with disabilities, individuals from disadvantaged backgrounds, and women at the faculty level".

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-22-019.html

Notice of NIH's Interest in Diversity

Notice Number: NOT-OD-20-031

Release Date: November 22, 2019

Underrepresented Populations in the U.S. Biomedical, Clinical, Behavioral and Social Sciences Research Enterprise

A. "Individuals from racial and ethnic groups... The following racial and ethnic groups have been shown to be underrepresented in biomedical research: Blacks or African Americans, Hispanics or Latinos, American Indians or Alaska Natives, Native Hawaiians and other Pacific Islanders.

In addition, it is recognized that underrepresentation can vary from setting to setting; individuals from racial or ethnic groups that can be demonstrated convincingly to be underrepresented by the grantee institution should be encouraged to participate in NIH programs to enhance diversity…"

Notice of NIH's Interest in Diversity

Notice Number: NOT-OD-20-031

Release Date: November 22, 2019

Underrepresented Populations in the U.S. Biomedical, Clinical, Behavioral and Social Sciences Research Enterprise

B. "Individuals with disabilities…"

C. "Individuals from disadvantaged backgrounds…"

D. "…NIH encourages institutions to consider women for faculty-level, diversity-targeted programs to address faculty recruitment, appointment, retention or advancement…"

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-20-031.html

Ruth L. Kirschstein National Research Service Award (NRSA) Individual Fellowship for Students at Institutions with NIH-Funded Institutional Predoctoral Dual-Degree Training Programs (Parent F30)

NATIONAL INSTITUTES OF HEALTH (NIH)

National Eye Institute (NEI)

National Heart, Lung, and Blood Institute (NHLBI)

National Institute on Aging (NIA)

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

National Institute of Allergy and Infectious Diseases (NIAID)

Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)

National Institute on Deafness and Other Communication Disorders (NIDCD)

National Institute of Dental and Craniofacial Research (NIDCR)

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

National Institute on Drug Abuse (NIDA)

National Institute of Environmental Health Sciences (NIEHS)

National Institute of Mental Health (NIMH)

National Institute of Nursing Research (NINR)

National Institute on Minority Health and Health Disparities (NIMHD)

National Center for Complementary and Integrative Health (NCCIH)

National Cancer Institute (NCI)

Notice of Funding Opportunity (NOFO) Number

PA-23-260

https://grants.nih.gov/grants/guide/pa-files/PA-23-260.html

Ruth L. Kirschstein National Research Service Award (NRSA) Individual Fellowship for Students at Institutions Without NIH-Funded Institutional Predoctoral Dual-Degree Training Programs (Parent F30)

NATIONAL INSTITUTES OF HEALTH (NIH)

National Eye Institute (NEI)

National Heart, Lung, and Blood Institute (NHLBI)

National Human Genome Research Institute (NHGRI)

National Institute on Aging (NIA)

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

National Institute of Allergy and Infectious Diseases (NIAID)

National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)

National Institute of Biomedical Imaging and Bioengineering (NIBIB)

Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)

National Institute on Deafness and Other Communication Disorders (NIDCD)

National Institute of Dental and Craniofacial Research (NIDCR)

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

National Institute on Drug Abuse (NIDA)

National Institute of Environmental Health Sciences (NIEHS)

National Institute of General Medical Sciences (NIGMS)

National Institute of Mental Health (NIMH)

National Institute of Neurological Disorders and Stroke (NINDS)

National Institute of Nursing Research (NINR)

National Institute on Minority Health and Health Disparities (NIMHD)

National Center for Complementary and Integrative Health (NCCIH)

National Cancer Institute (NCI)

Notice of Funding Opportunity (NOFO) Number

PA-23-261

https://grants.nih.gov/grants/guide/pa-files/PA-23-261.html

Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship (Parent F32)

National Eye Institute (NEI)

National Heart, Lung, and Blood Institute (NHLBI)

National Human Genome Research Institute (NHGRI)

National Institute on Aging (NIA)

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

National Institute of Allergy and Infectious Diseases (NIAID)

National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)

National Institute of Biomedical Imaging and Bioengineering (NIBIB)

Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)

National Institute on Deafness and Other Communication Disorders (NIDCD)

National Institute of Dental and Craniofacial Research (NIDCR)

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

National Institute on Drug Abuse (NIDA)

National Institute of Environmental Health Sciences (NIEHS)

National Institute of General Medical Sciences (NIGMS)

National Institute of Mental Health (NIMH)

National Institute of Nursing Research (NINR)

National Institute on Minority Health and Health Disparities (NIMHD)

National Center for Complementary and Integrative Health (NCCIH)

National Cancer Institute (NCI)

February 14, 2024 - Participation added (NOT-RM-24-006) Office of Strategic Coordination (Common Fund)

Notice of Funding Opportunity (NOFO) Number

PA-23-262

NINDS Ruth L. Kirschstein National Research Service Award (NRSA) for Training of Postdoctoral Fellows (F32 Clinical Trial Not Allowed)

PAR-21-032

"The purpose of this award is to support outstanding scientific training of highly promising postdoctoral candidates with outstanding mentors. Candidates are eligible to apply for support from this program from ~12 months prior to the start of the proposed postdoctoral position to within 12 months after starting in the proposed postdoctoral position. This NINDS F32 seeks to foster early, goal-directed planning and to encourage applications for bold and/or innovative projects by the candidate that have the potential for significant impact. Inclusion of preliminary data is strongly discouraged; rather, this F32 seeks innovative research ideas and thoughtful plans for training and mentorship that will facilitate the development of the postdoctoral fellow into an outstanding scientist. Applications are expected to incorporate strong training in quantitative reasoning and the quantitative principles of experimental design and analysis. Support by this program is limited to the first 4 years of a candidate's activity in a specific laboratory or research environment, so as to further encourage early, thoughtful planning and timely completion of "mentored training" within a particular lab or environment."

https://grants.nih.gov/grants/guide/pa-files/PAR-21-032.html

Individual Fellowships

Non-government, non-profit agencies

- Voluntary Health Organizations
- Professional Societies
- Private Foundations

Post-doc: Individual Fellowship

- Voluntary Health Organizations, Foundations, Professional Societies -

- American Cancer Society
- American Heart Association
- American Liver Foundation
- Daland Fellowships in Clinical Investigation
- Damon Runyon Cancer Research Foundation
- Helen Hay Whitney Foundation
- Jane Coffin Childs Memorial Fund

American Heart Association

Postdoctoral Fellowship Program

- AHA's research program is focused on cardiovascular and cerebrovascular disease research
- "embedded in an appropriate investigative group with the mentorship, support, and relevant scientific guidance of a research mentor"
- Funding: Stipend, Health insurance, Project support
- Award Duration: 1-2 years, May apply for a second 2-year award
- US citizenship/Permanent Residency not required

National Science Foundation: Graduate Research Fellowship Program

Eligibility:

- Citizenship:
  - US citizens, Nationals, Permanent Residents
- Degree Requirements:
  - Rules with regard to degree status (undergraduate vs. graduate student), joint degree programs, # of applications
- Research Areas not Eligible:
  - "goals are directly human disease- or health-related, including the etiology, diagnosis, and/or treatment of disease or disorder"

https://www.nsfgrfp.org/

National Science Foundation: Graduate Research Fellowship Program

Fields of Study: Chemistry, Computer and Information Sciences and Engineering, Engineering, Geosciences; Life Sciences; Materials Research; Mathematical Sciences; Physics and Astronomy; Psychology; Social, Behavioral and Economic Sciences; STEM Education and Learning Research

- **Life Sciences:** Artificial Intelligence, Biochemistry, Bioinformatics and Computational Biology, Biophysics, Cell Biology, Computationally Intensive Research, Developmental Biology, Ecology, Environmental Biology, Evolutionary Biology, Genetics, Genomics, Microbial Biology, Neurosciences, Organismal Biology, Physiology, Proteomics, Quantum Information Science, Structural Biology, Systematics and Biodiversity, Systems and Molecular Biology, Other (specify)

https://www.nsfgrfp.org/

National Science Foundation: Graduate Research Fellowship Program

Application includes:

- Personal, Relevant Background and Future Goals
- Graduate Research Plan
- Reference Letters
- Transcripts

Funding:

- Stipend
- Cost of Education allowance

https://www.nsfgrfp.org/

Topics to be Discussed

- **Individual Fellowship Programs**
  - Overview of Programs and Funding Agencies
  - **NIH Review Process, Criteria, and Scoring System**
  - Components of an NIH Application
- Career Transition Funding Programs
- Junior Faculty Career Development Programs
  - Overview of Programs and Funding Agencies
  - NIH Review Process, Criteria, and Scoring System
  - Components of an NIH Application

Application Due Dates

Activity Codes	Program Description	Cycle I Due Date	Cycle II Due Date	Cycle III Due Date
F Series Fellowships (including F31 Diversity – NOT-OD-17-029) *new, renewal, resubmission*	***Individual* National Research Service Awards (Standard)** (see NRSA Training Page)	April 8	August 8	December 8

https://grants.nih.gov/grants/how-to-apply-application-guide/due-dates-and-submission-policies/due-dates.htm

Application Due Dates

All Activity Codes Cited Above *new, renewal, resubmission, revision*	**AIDS and AIDS-Related Applications** *Effective. Sept 5, 2015 - N/A for SBIR/STTR Applications using Standard Due Dates NOTE: See Key Dates section of funding opportunity announcement to determine if AIDS dates apply.	May 7	September 7	January 7

https://grants.nih.gov/grants/how-to-apply-application-guide/due-dates-and-submission-policies/due-dates.htm

Application Due Dates

Review and Award Cycles

	Cycle I	Cycle II	Cycle III
Application Due Dates	January 25 - May 7	May 25 - Septem	September 25 - January 7
Scientific Merit Review	June - July	October - Novem	February - March
Advisory Council Round	August or October *	January	May
Earliest Project Start Date	September or December *	April	July

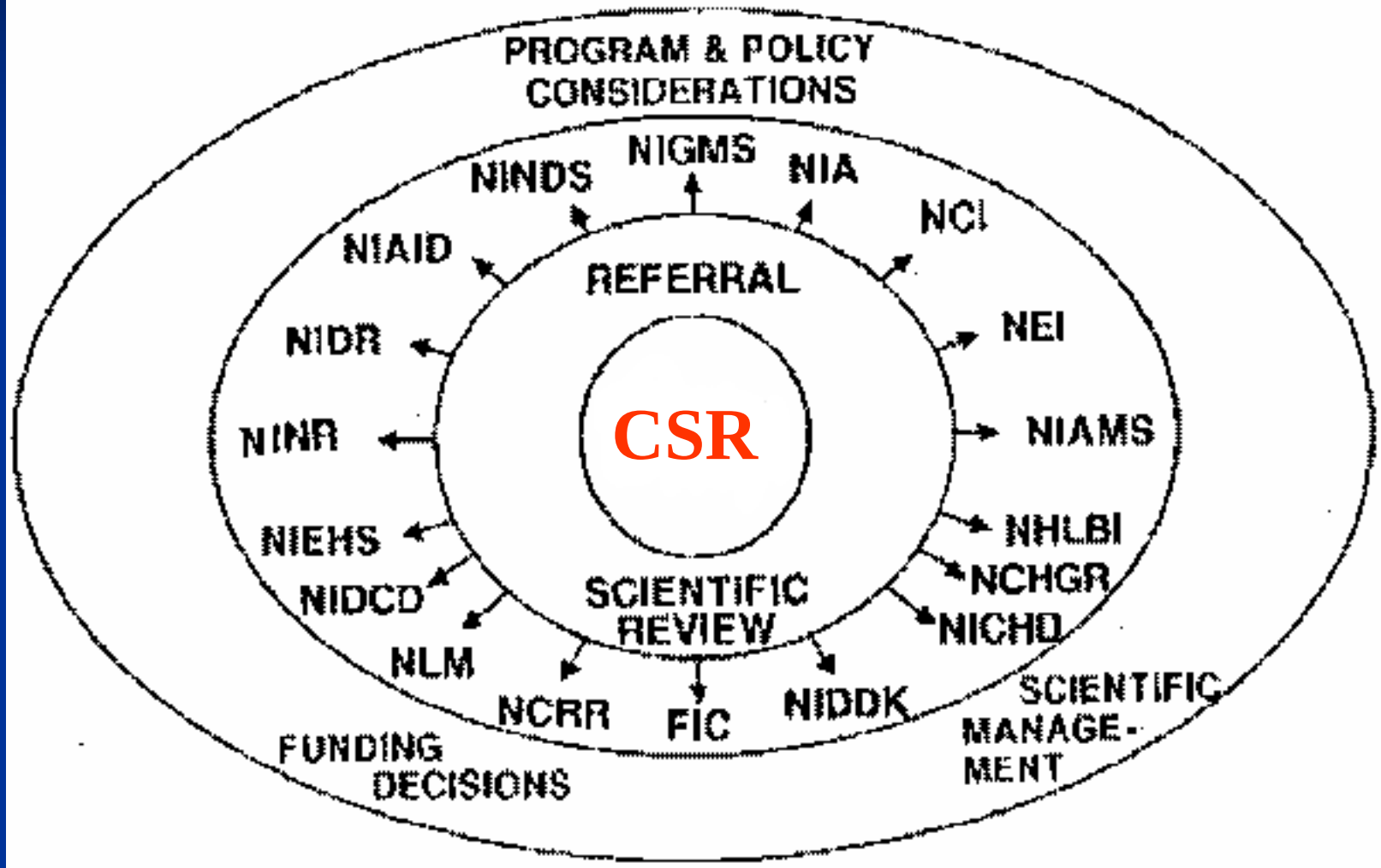
https://grants.nih.gov/grants/how-to-apply-application-guide/due-dates-and-submission-policies/due-dates.htm

National Institutes of Health

- National Cancer Institute
- National Eye Institute
- National Heart, Lung, & Blood Institute
- National Human Genome Research Inst
- National Institute on Aging
- National Inst of Alcohol Abuse & Alcoholism
- National Inst of Allergy & Infectious Diseases
- National Inst of Arthritis & Musculoskeletal & Skin Diseases
- National Institute of Child Health & Human Development
- National Inst on Deafness & other Communication Disorders
- National Inst of Dental & Craniofacial Research
- National Institute of Diabetes & Digestive & Kidney Diseases
- National Institute on Drug Abuse
- National Institute of Environmental Health Sciences
- National Institute of General Medical Sciences
- National Inst of Biomedical Imaging and Bioengineering
- National Institute of Mental Health
- National Inst of Neurological Dis and Stroke
- National Institute of Nursing Research
- National Library of Medicine
- National Ctr for Complementary & Integrative Health
- National Inst on Minority Health & Health Disparities
- Office of Research Infrastructure
- Center for Scientific Review

Adapted from: NIH (DRG) - Peer Review of NIH Research Grants Applications

NIH REFERRAL AND REVIEW SYSTEM
REGULAR RESEARCH GRANT APPLICATIONS



Center for Scientific Review

CSR by the Numbers

NIH

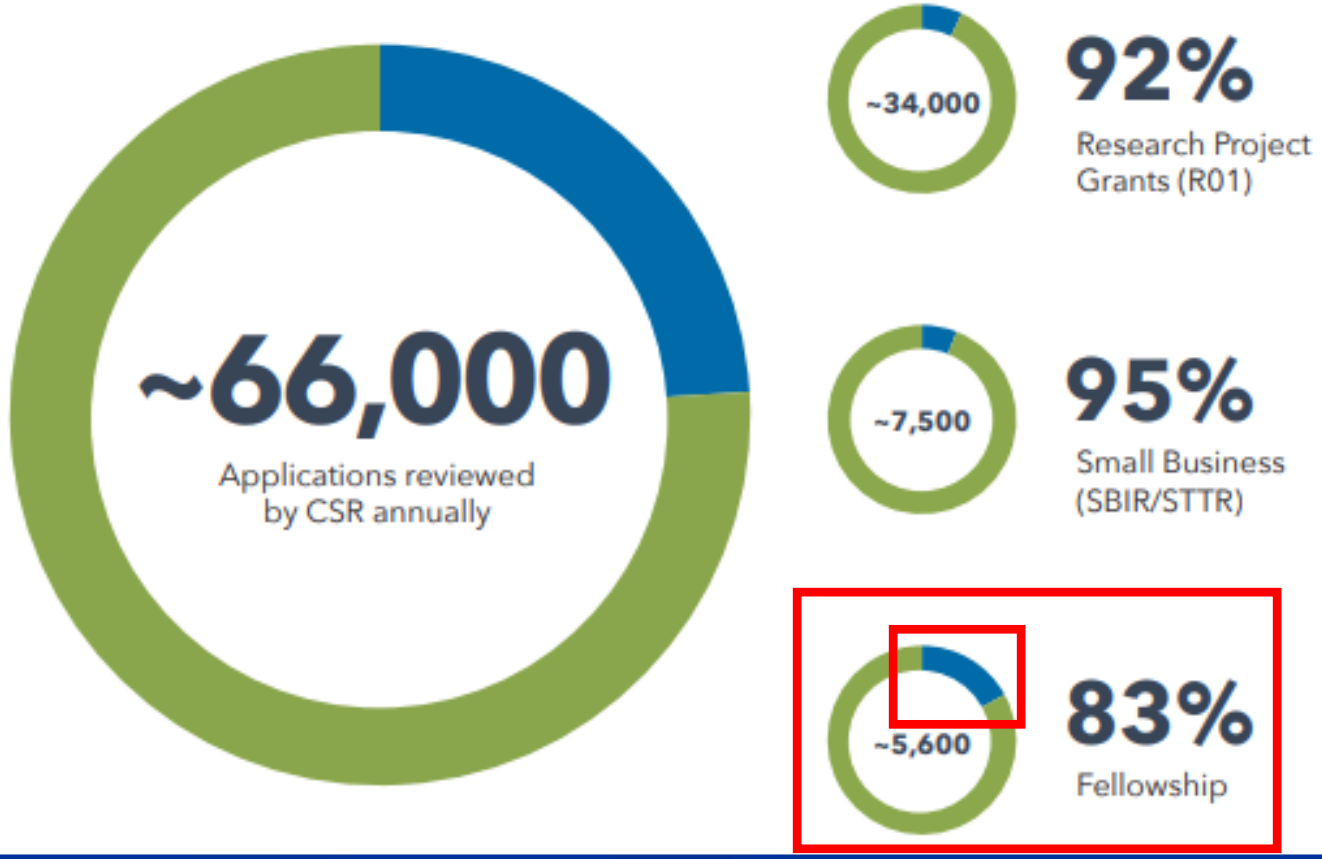
~88,000

NIH applications received annually

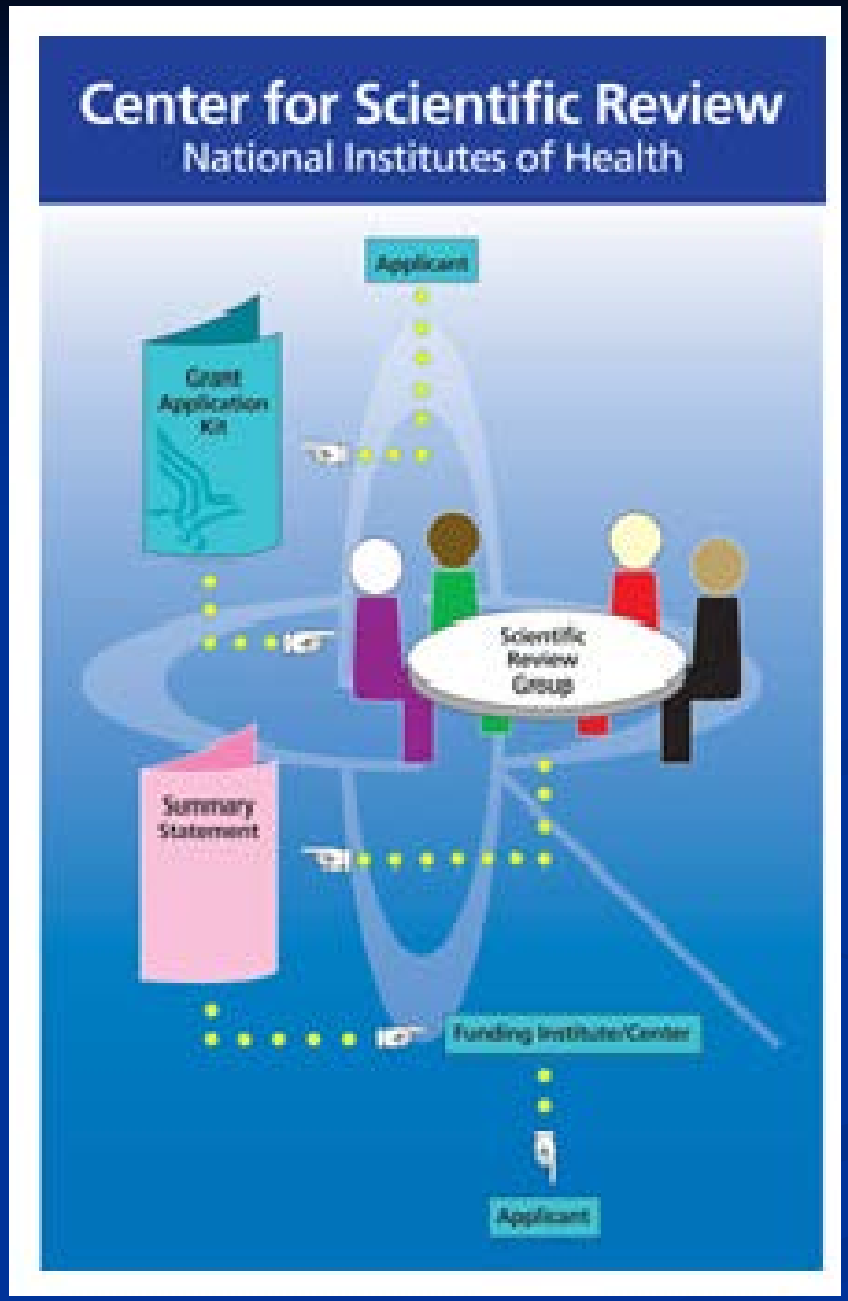
CSR

75%

of NIH applications are reviewed by CSR



https://public.csr.nih.gov/sites/default/files/2022-09/CSR-strategic-plan_1.pdf


Center for Scientific Review
National Institutes of Health
Applicant
Grant Application Kit
Scientific Review Group
Summary Statement
Funding Institute/Center
Applicant

NIH Center for Scientific Review

Fellowship Study Sections

Study Section	Study Section Description	Scientific Review Officer
F01A	Fellowships: Brain Disorders and Related Neurosciences	Dr. Vilen Movsesyan
F01B	Fellowships: Learning and Memory, Language, Communication and Related Neurosciences	Dr. Eileen Moore
F02A	Fellowships: Behavioral Neuroscience	Dr. Simone Weiner
F02B	Fellowships: Sensory and Motor Neurosciences, Cognition and Perception	Dr. John Stabley
F03A	Fellowships: Neurodevelopment, Oxidative Stress and Synaptic Plasticity	Dr. Robert Elliott
F03B	Fellowships: Biophysical, Physiological, Pharmacological and Bioengineering Neuroscience	Dr. Jennifer Kielczewski
F03B	Fellowships: Biophysical, Physiological, Pharmacological and Bioengineering Neuroscience, and Vision	Dr. Jennifer Kielczewski
F03C	Fellowships: Neurodegeneration and Aging	Dr. Ashley Kopec
F04A	Fellowships: Chemistry, Biochemistry and Biophysics A	Dr. Vandana Kumari
F04B	Fellowships: Chemistry, Biochemistry and Biophysics B	Dr. Dennis Pantazatos
F05-D	Fellowships: Cell Biology, Developmental Biology, and Bioengineering	Dr. Alexander Gubin
F05-Q	Fellowships: Cell Biology, Developmental Biology, and Bioengineering	Dr. Mufeng Li
F06	Fellowships: Endocrinology, Metabolism, Nutrition and Reproductive Sciences	Dr. Anthony Chan
F07A	Fellowships: Infectious Diseases and Immunology A	Dr. DeAnna Bublitz
F07B	Fellowships: Infectious Diseases and Immunology B	Dr. Diana Ortiz-Garcia
F07C	Fellowships: Infectious Diseases and Immunology C	Dr. Shannon Sherman
F08	Fellowships: Genes, Genomes and Genetics	Dr. Linda Jurata
F09A	Fellowships: Oncological Sciences	Dr. Reigh-Yi Lin
F09B	Fellowships: Oncological Sciences	Dr. Charles Morrow
F09C	Fellowships: Oncological Sciences	Dr. Zack Howard
F10A	Fellowships: Physiology and Pathobiology of Cardiovascular and Respiratory Systems	Dr. Michael Bloom
F10B	Fellowships: Musculoskeletal, Rehabilitation and Skin Sciences	Dr. Richard Ingraham
F10C	Fellowships: Vascular and Hematological Systems, Surgical Sciences, Biomedical Imaging, and Bioengineering	Dr. Courtney Watkins
F16	Fellowships: Risk, Prevention and Health Behavior	Dr. Jacinta Bronte-Tinkew
F17A	Fellowships: HIV/AIDS Biological	Dr. Diana Ortiz-Garcia
F17B	Fellowships: HIV/AIDS Behavioral	Dr. Shivakumar Chittari
F18	Fellowships: Epidemiology and Population Sciences	Dr. Lisa Steele

Fellowships: Infectious Diseases and Immunology – F07A

The Infectious Diseases and Immunology, F07A, study section reviews fellowship applications broadly focused on all bacteria-related topics including bacteriology, bacterial pathogenesis, and bacterial-host interactions, immune responses to the bacteria and development of anti-bacterial agents or vaccines to treat and prevent bacterial diseases

- List of Reviewers on 11/07/2023
- List of Reviewers on 07/19/2023
- List of Reviewers on 03/23/2023

Shared Interests and Overlaps:

Discover Other Possible Study Sections

https://public.csr.nih.gov/StudySections/DPPS/IIDB/F07A

"Notice of NIH Policy to All Applicants: Meeting rosters are provided for information purposes only. Applicant investigators and institutional officials must not communicate directly with study section members about an application before or after the review. Failure to observe this policy will create a serious breach of integrity in the peer review process, and may lead to actions outlined in NOT-OD-22-044, including removal of the application from immediate review."

NIH RePORT RePORTER

Advanced Search

Project Details

Agency/Institute/Center

☑ Admin ☐ Funding

NIH Spending Category

○ AND ◉ OR

Funding Mechanism

Award Type

Project Number/Application ID

Format: 5R01CA012345-04/ 8515397, semicolon ";" separated

OR

1 R01 CA 811099 01 A1S1

Activity Code

Cooperative Agreement

Study Section 1 ×

F07A (20) Infectious Disease and Immunology A

Standing CSR study sections only

Program Officer (PO)

PO Names, semicolon ";" separated

https://reporter.nih.gov/advanced-search

Search Results

66 Projects

Save...

Search Criteria **Fiscal Year:** Active Projects **Study Section:** F07A (20) Infectious Disease and Immunology A

Projects | Publications | Patents | Clinical Studies | News & More

List | Charts | Map

Filters

- Fiscal Years
- Org Names
- Agencies
- States
- Countries
- Principal Investigators

T Act Project	Year	Sub	Principal Investigator(s)/ Project Leader(s)	Organization	Fiscal Year
Importance and function of highly conserved substrates of the Legionella pneumophila Type II Secretion System for Infection					
1 F31 AI172194-01A1			ADAMS, CARLTON	NORTHWESTERN UNIVERSITY AT CHICAGO	2023
Functional analysis of a novel cell envelope integrity protein in Brucella ovis					
1 F32 AI174818-01A1			ALAKAVUKLAR, MELENE	MICHIGAN STATE UNIVERSITY	2023
Multifunctional roles of an Orientia tsutsugamushi nucleomodulin					
1 F32 AI174656-01A1			ALLEN, PAIGE	VIRGINIA COMMONWEALTH UNIVERSITY	2023
Effects of Age on Lipid Nanoparticle Delivery and mRNA Vaccination					
5 F31 AG077874-02			ARRAL, MARIAH	CARNEGIE-MELLON UNIVERSITY	2024
Elucidating how CRISPR-Cas Modulates the Spread of S. aureus Pathogenicity Islands					
5 F30 AI157535-03			BANH, DALTON VAN	WEILL MEDICAL COLL OF CORNELL UNIV	2023

https://reporter.nih.gov/advanced-search

How to Direct a Grant Application to the Appropriate Study Section

- Review research areas of Study Section
- Review roster of Study Section members
  - Do not contact reviewers
- Review Study Section's funded grants in NIH Reporter
- Discuss with colleagues in similar research area
- Request via Assignment Request Form in Application

PHS Assignment Request Form

OMB Number: 0925-0001
Expiration Date: 09/30/2024

Funding Opportunity Number:

Funding Opportunity Title:

Pre-populated from announcement information.

Awarding Component Assignment Suggestions (optional)

Awarding Component Assignment Suggestions (optional)

If you have a suggestion for an awarding component (e.g., NIH Institute/Center) assignment, use the link below to identify the appropriate short abbreviation (e.g., "NCI" for National Cancer Institute) and enter it below in the boxes for "Suggested Awarding Components". All suggestions will be considered; however, not all assignment suggestions can be honored.

Information about Awarding Component can be found here: https://grants.nih.gov/grants/phs_assignment_information.htm#AwardingComponents

Suggested Awarding Components:

Suggestions are considered with other assignment factors. Not all suggestions can be honored.

Study Section Assignment Suggestions *(optional)*

Study Section Assignment Suggestions *(optional)*

If you have a suggestion for a study section assignment, use the link below to identify a study section(s). Enter the short abbreviation for that study section in the boxes for "Suggested Study Sections." Remove all hyphens, parentheses, and spaces. All suggestions will be considered; however, not all assignment suggestions can be honored.

For example, enter "CAMP" if you wish to suggest assignment to the NIH Cancer Molecular Pathobiology study section, or "ZRG1HDMR" if you wish to suggest assignment to the NIH Healthcare Delivery and Methodologies SBIR/STTR panel for informatics.

Information about Study Sections can be found here: https://grants.nih.gov/grants/phs_assignment_information.htm#StudySection

Suggested Study Sections:
Only 20 characters allowed

Suggestions are considered with other assignment factors. Not all suggestions can be honored.

Rationale for assignment suggestions *(optional)*

Entry is limited to 1000 characters.

Up to 1000 characters.

https://grants.nih.gov/grants/ElectronicReceipt/files/Annotated_Forms_General_FORMS-H.pdf

PHS Assignment Request Form

List individuals who should not review your application and why *(optional)*

Entry is limited to 1000 characters.

Provide sufficient information (e.g., name organization affiliation) to correctly identify each individual. Provide specific reason why an individual should not review your application. Information will be considered, but listing an individual does not guarantee they will not be on review panel.

Identify scientific areas of expertise needed to review your application *(optional)*

Note: Do not provide names of individuals

Identify scientific areas of expertise needed to review your application *(optional)*

Note: Do not provide names of individuals

1

Expertise:
Each entry is limited to 40 characters

Limit your answers to expertise. DO NOT enter the names of individuals you'd like to review your application.

Initial Review Group or Study Section Actions

- **Discussed applications:**
  - Receives Impact/Priority Scores
  - Receives Scores for individual core review criteria
- **Not Discussed**
  - Receives Scores for individual core review criteria
- Not Recommended for Further Consideration (NRFC)
- Other: e.g., Deferred

NIH's Evaluation System

9-point rating scale (1=exceptional; 9=poor)

Impact	Score	Descriptor	Strengths/Weaknesses
High Impact	1	Exceptional	Strengths
	2	Outstanding	
	3	Excellent	
Moderate Impact	4	Very Good	
	5	Good	
	6	Satisfactory	
Low Impact	7	Fair	
	8	Marginal	
	9	Poor	Weaknesses

http://enhancing-peer-review.nih.gov/docs/scoring_and_critique_overview_June2009.pdf

Impact	Score	Descriptor	Additional Guidance on Strengths/Weaknesses
High	1	Exceptional	Exceptionally strong with essentially no weaknesses
	2	Outstanding	Extremely strong with negligible weaknesses
	3	Excellent	Very strong with only some minor weaknesses
Medium	4	Very Good	Strong but with numerous minor weaknesses
	5	Good	Strong but with at least one moderate weakness
	6	Satisfactory	Some strengths but also some moderate weaknesses
Low	7	Fair	Some strengths but with at least one major weakness
	8	Marginal	A few strengths and a few major weaknesses
	9	Poor	Very few strengths and numerous major weaknesses

Minor Weakness: An easily addressable weakness that does not substantially lessen impact

Moderate Weakness: A weakness that lessens impact

Major Weakness: A weakness that severely limits impact

http://grants.nih.gov/grants/peer/guidelines_general/scoring_system_and_procedure.pdf

FELLOWSHIPS & CAREER AWARDS

Overall Impact:
The likelihood that the proposed training (F) or career development (K) will enhance the candidate's potential for a productive, independent scientific research career in a health-related field.

Overall Impact	High	Medium	Low
Score	1 2 3	4 5 6	7 8 9

Evaluating Overall Impact
Consider the 5 criteria
(weighting based on reviewer's judgment):

Fs
- Applicant
- Sponsor(s)
- Research Training Plan
- Training Potential
- Institutional Environment & Commitment

Ks
- Candidate
- Career Development Plan/Goals*
- Research Plan
- Mentor(s)**
- Environment & Institutional Commitment

and other score influences, e.g. human subjects, animal welfare, inclusion plans, and biohazards

*K05 and K24: Plan to Provide Mentoring
**K02: Consultants/Collaborators

e.g. Proposes training or career development of high value/benefit for the candidate who has high potential for developing into a productive, independent scientist. May have some or no weaknesses in the criteria.

e.g. Proposes training or career development of high or moderate value/benefit for the candidate who has high or moderate potential for further development, but weaknesses in the criteria reduce the overall impact to medium.

e.g. Proposes training or career development of moderate value/benefit for the candidate who shows moderate potential. May have some weaknesses in the criteria.

e.g. Proposes training or career development of moderate or low value/benefit for the candidate who has moderate or low potential for further development. Weaknesses in the criteria reduce the overall impact to low.

e.g. Proposes training or career development of low value/benefit for the candidate who shows low potential. May have some weaknesses in the criteria.

5 is a good, medium-impact application. The entire scale (1-9) should always be considered.

https://grants.nih.gov/grants/peer/guidelines_general/scoring_guidance_training.pdf

Impact Score

- Preliminary Impact Scores determine which applications discussed at study section
- Impact Score given by each member of the study section
- Overall Impact Score (for discussed applications): Mean of reviewers' Impact Scores x10
- 81 possible overall Impact Scores

  (10 – 90, whole numbers)

Fellowship Payline: NIAID

NIAID Paylines for FY 2024

F30	20 overall impact score	Interim	NRSA Individual Predoctoral M.D./Ph.D. or Other Dual-Doctoral Degree Fellowships
F31	24 overall impact score	Interim	NRSA Individual Predoctoral Fellowships
F32	31 overall impact score	Interim	NRSA Individual Postdoctoral Fellowships

https://www.niaid.nih.gov/grants-contracts/niaid-paylines

Fellowship Payline: NIAID

	Overall Impact Score		
	F30	F31	F32
2023	20	19	22
2022	20	19	22
2021	20	19	22
2020	20	19	22
2019	20	19	24
2018	20	19	20
2017	15	17	19
2016	14	21	20
2015	18	22	20
2014	13	30	25

https://www.niaid.nih.gov/grants-contracts/archive-paylines-fiscal-year

Fellowship Payline: NHLBI

Payline

Grant Program	Grant Program Description	Percentile	Priority Score
F30	Pre-doctoral NRSA	N/A	20
F31, F32, F33	Pre- and Post-doctoral NRSA	35	N/A

FY23

https://www.nhlbi.nih.gov/current-operating-guidelines

F30 Ruth L. Kirschstein Individual Predoctoral NRSA for MD/PhD and other Dual Degree Fellowships

Individual fellowships for predoctoral training which leads to the combined MD/PhD and other dual Clinical/Research degrees.

Details | View Current Funding Opportunities

F31 Ruth L. Kirschstein Predoctoral Individual National Research Service Award

To provide predoctoral individuals with supervised research training in specified health and health-related areas leading toward the research doctoral degree (e.g., PhD).

Details | View Current Funding Opportunities

F32 Ruth L. Kirschstein Postdoctoral Individual National Research Service Award

To provide postdoctoral research training to individuals to broaden their scientific background and extend their potential for research in specified health-related areas.

Details | View Current Funding Opportunities

Application Review Information from the Fellowship Funding Opportunity Announcements

"A fellowship application has a research project that is integrated with the training plan. The review will emphasize the candidate's potential for a productive career, the candidate's need for the proposed training, and the degree to which the research project and training plan, the sponsor(s), and the environment will satisfy those needs."

https://researchtraining.nih.gov/programs/fellowships

Overall Impact/Merit Score

Reviewer's assessment "that the fellowship will enhance the candidate's potential for, and commitment to, a productive independent scientific research career in a health-related field…"

Overall Impact/Merit	*Write a paragraph summarizing the factors that informed your Overall Impact score.*

https://researchtraining.nih.gov/programs/fellowships

Reviewers will consider each of the five review criteria below in the determination of scientific and technical merit, and give a separate score for each.

1. Fellowship Applicant
Strengths • **Weaknesses** •

2. Sponsors, Collaborators, and Consultants
Strengths • **Weaknesses** •

3. Research Training Plan
Strengths • **Weaknesses** •

4. Training Potential
Strengths • **Weaknesses** •

5. Institutional Environment & Commitment to Training
Strengths • **Weaknesses** •

1. Fellowship Applicant

- "Are the candidate's academic record and research experience of high quality?
- Does the candidate have the potential to develop into an independent and productive researcher?
- Does the candidate demonstrate commitment to a research career in the future?

https://researchtraining.nih.gov/programs/fellowships

2. Sponsors, Collaborators, and Consultants

- "Are the sponsor(s') research qualifications (including recent publications) and track record of mentoring individuals at a similar stage appropriate for the needs of the candidate?
- Is there evidence of a match between the research and clinical interests (if applicable) of the candidate and the sponsor(s)?
- Do(es) the sponsor(s) demonstrate an understanding of the candidate's training needs as well as the ability and commitment to assist in meeting these needs?"

https://researchtraining.nih.gov/programs/fellowships

2. Sponsors, Collaborators, and Consultants

- "Is there evidence of adequate research funds to support the candidate's proposed research project and training for the duration of the research component of the fellowship?
- If a team of sponsors is proposed, is the team structure well justified for the mentored training plan, and are the roles of the individual members appropriate and clearly defined?"

https://researchtraining.nih.gov/programs/fellowships

2. Sponsors, Collaborators, and Consultants

- "Are the qualifications of any collaborator(s) and/or consultant(s), including their complementary expertise and previous experience in fostering the training of fellows, appropriate for the proposed project?
- Does the sponsor's research and training record, as well as mentoring statement, indicate that the candidate will receive exceptional training in the proposed research area and have the opportunity to publish high quality papers and present research data at national meetings as the project progresses?"

https://researchtraining.nih.gov/programs/fellowships

2. Sponsors, Collaborators, and Consultants

- "If the candidate is proposing to gain experience in a clinical trial as part of his or her research training, is there evidence of the appropriate expertise, experience, resources, and ability on the part of the sponsor(s) to guide the applicant during the clinical trial research experience?"

https://researchtraining.nih.gov/programs/fellowships

3. Research Training Plan

- "Is the proposed research project of high scientific quality, and is it well integrated with the proposed research training plan?
- Is the prior research that serves as the key support for the proposed project rigorous?
- Has the applicant included plans to address weaknesses in the rigor of prior research that serves as the key support for the proposed project?
- Has the applicant presented strategies to ensure a robust and unbiased approach, as appropriate for the work proposed?"

https://researchtraining.nih.gov/programs/fellowships

3. Research Training Plan

- "Has the applicant presented adequate plans to address relevant biological variables, such as sex, for studies in vertebrate animals or human subjects?
- Is the research project consistent with the applicant's stage of research development?
- Is the proposed time frame feasible to accomplish the proposed training?
- Does the training plan provide adequate opportunities to present and publish research findings and meet with scientists in the community at national meetings as the work progresses?"

https://researchtraining.nih.gov/programs/fellowships

3. Research Training Plan

- "Will the training plan provide the professional skills needed for the candidate to transition to the next stage of their research career?
- If proposed, will the clinical trial experience contribute to the proposed project and/or the candidate's research training?"

https://researchtraining.nih.gov/programs/fellowships

3. Research Training Plan

Postdoctoral:

- "Based on the sponsor's description of their active research program, is the candidate's proposed research project sufficiently distinct from the sponsor's funded research for the candidate's career stage?"

https://researchtraining.nih.gov/programs/fellowships

3. Research Training Plan

Dual-Degree (MD/PhD):

- "Is the training plan well-reasoned, and likely to provide an effective, integrated research and clinical training experience and ease the transitions between the phases of the dual-degree program?"

https://researchtraining.nih.gov/programs/fellowships

4. Training Potential

- "Are the proposed research project and training plan likely to provide the candidate with the requisite individualized and mentored experiences in order to obtain appropriate skills for a research career?
- Does the training plan take advantage of the candidate's strengths and address gaps in needed skills?
- Does the training plan document a clear need for, and value of, the proposed training?
- Does the proposed training have the potential to serve as a sound foundation that will clearly enhance the candidate's ability to develop into a productive researcher?"

https://researchtraining.nih.gov/programs/fellowships

4. Training Potential

Dual-Degree (MD/PhD):

- "If applicable to the dual-degree program, are appropriate opportunities for electives, early and longitudinal clinical experiences, or other enhanced clinical training available to the candidate?
- Are appropriate opportunities available to ease the transition to clinical clerkships and for research electives during clinical training?"

https://researchtraining.nih.gov/programs/fellowships

5. Institutional Environment & Commitment to Training

- "Are the research facilities, resources (e.g., equipment, laboratory space, computer time, subject populations, clinical training settings), and training opportunities (e.g., seminars, workshops, professional development opportunities) adequate and appropriate?
- Is the institutional environment for the candidate's scientific development of high quality?
- Is there appropriate institutional commitment to fostering the applicant's mentored training?"

https://researchtraining.nih.gov/programs/fellowships

5. Institutional Environment & Commitment to Training

Post-docs:

- "Does the institutional and/or lab environment provide appropriate and sufficient opportunities for the applicant to gain the professional skills needed for a successful research career?"

https://researchtraining.nih.gov/programs/fellowships

5. Institutional Environment & Commitment to Training

Dual-Degree (MD/PhD):

- "Is the institutional environment for the candidate's scientific and clinical development of high quality?
- Are the facilities and resources appropriate to provide exposure to a research-oriented, clinical environment?
- Does the environment include individuals with similar training who will serve as role models for the candidate?"

https://researchtraining.nih.gov/programs/fellowships

5. Institutional Environment & Commitment to Training

Dual-Degree (MD/PhD):

- "Given the integrated nature of the training program, will appropriate advising be available to the candidate as he/she transitions between the research and clinical components of the integrated training program and to the next career stage?"

https://researchtraining.nih.gov/programs/fellowships

5. Institutional Environment & Commitment to Training

Dual-Degree (MD/PhD):

- "Is there appropriate institutional commitment to fostering the candidate's integrated training as a physician-scientist or other clinician-scientist?
- Does this commitment extend to support the candidate's research and training, if needed, for the duration of the proposed award?"

https://researchtraining.nih.gov/programs/fellowships

Additional Review Criteria

Evaluated for the overall impact score, but not given an individual score

- Protections for Human Subjects
- Inclusion of Women, Minorities, and Individuals Across the Lifespan
- Vertebrate Animals
- Biohazards
- Resubmissions
  - Response to previous reviewers' comments and subsequent changes made to the proposal

https://researchtraining.nih.gov/programs/fellowships

Additional Review Considerations

Not given an individual score and not considered for the overall impact score

- Training in the Responsible Conduct of Research
  - Address required components (mentor/faculty involvement)
- Select Agent Research
- Resource Sharing Plans
  - e.g., Sharing Model Organisms
- Authentication of Key Biological and/or Chemical Resources
- Budget and Period of Support

https://researchtraining.nih.gov/programs/fellowships

Guidance for NIH Reviewers

https://grants.nih.gov/grants/policy/review/rev_prep/applications.htm

- Rigor and Transparency
- Sex as a Biological Variable
- Vertebrate Animals
- Human Subjects Section
- Clinical Trials
- Single IRB for multi-site studies
- Inclusion on the Basis of Sex/Gender, Race, Ethnicity, and Age in Clinical Research
- Human Embryonic Stem Cells
- Authentication of Key Biological and/or Chemical Resources
- Select Agents
- Resource Sharing Plans
- Budget Information
- Revision Applications

Guidelines for NIH Reviewers

https://grants.nih.gov/grants/policy/review-guidelines.htm

R	R and U Awards (Research Project Grants; R01, R03, R21, SBIR/STTR, etc. and Cooperative Agreements: U01, etc.).	+
K	K Awards (Career Development)	+
F	F Awards (Fellowships)	+
S	S10 Awards (Shared Instrumentation)	+
T	T Awards (Training)	+

Guidelines for NIH Reviewers

https://grants.nih.gov/grants/policy/review-guidelines.htm

F | F Awards (Fellowships)

- F30 GUIDE FOR REVIEWERS (11/22/2021)
- F31 Diversity GUIDE FOR REVIEWERS (11/22/2021)
- F31 GUIDE FOR REVIEWERS (11/22/2021)
- F32 GUIDE FOR REVIEWERS (11/22/2021)
- F33 GUIDE FOR REVIEWERS (11/22/2021)

NIH Fellowship Review Criteria – Changes

- For applications with deadlines on or after January 25, 2019

Notice Number: NOT-OD-18-227

Additional Review Criteria	Inclusion of Women, Minorities, and Individuals Across the Lifespan	When the proposed project involves human subjects and/or NIH-defined clinical research, the committee will evaluate the proposed plans for the inclusion (or exclusion) of individuals on the basis of sex/gender, race, and ethnicity, as well as the inclusion (or exclusion) of children to determine if it is justified in terms of the scientific goals and research strategy proposed.	When the proposed project involves human subjects and/or NIH-defined clinical research, the committee will evaluate the proposed plans for the inclusion (or exclusion) of individuals on the basis of sex/gender, race, and ethnicity, as well as the inclusion (or exclusion) of individuals of all ages (including children and older adults) to determine if it is justified in terms of the scientific goals and research strategy proposed.

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-116.html
https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-227.html

Clinical Trial-Specific Review Criteria

FOAs that accept clinical trials will include additional review criteria questions in *Section V. Application Review Information*.

The NIH Announces New Review Criteria for Ruth L. Kirschstein National Research Service Award (NRSA) Individual Fellowship Applications Involving Research Experiences in Clinical Trials

Notice Number: NOT-OD-17-122

Sponsors, Collaborators, and Consultants

- *If the applicant is proposing to gain experience in a clinical trial as part of his or her research training*, is there evidence of the appropriate expertise, experience, resources, and ability on the part of the sponsor(s) to guide the applicant during the clinical trial research experience?

Research Training Plan

- *If proposed, will the clinical trial experience contribute to the proposed project and/or the applicant's research training*?

https://grants.nih.gov/policy/clinical-trials/review-criteria.htm
https://grants.nih.gov/grants/guide/notice-files/NOT-OD-17-122.html
https://grants.nih.gov/grants/peer/critiques/f_D.htm

Topics to be Discussed

- **Individual Fellowship Programs**
  - Overview of Programs and Funding Agencies
  - NIH Review Process, Criteria, and Scoring System
  - **Components of an NIH Application**
- Career Transition Funding Programs
- Junior Faculty Career Development Programs
  - Overview of Programs and Funding Agencies
  - NIH Review Process, Criteria, and Scoring System
  - Components of an NIH Application

New NIH "FORMS-H" Grant Application Forms and Instructions Coming for Due Dates on or after January 25, 2023

The following application forms include substantive form changes (i.e., new/deleted/modified fields). All other forms include only an OMB expiration date change.

- PHS 398 Research Plan Form
- PHS 398 Career Development Award Supplemental Form
- PHS 398 Research Training Program Plan
- PHS Fellowship Supplemental Form

Key Changes:

- For NIH, as part of the implementation of the 2023 NIH Data Management and Sharing Policy, a new "Other Plan(s)" attachment field has been added to the PHS 398 Research Plan Form and the PHS 398 Career Development Award Supplemental Form. Applicants must attach the required Data Management and Sharing Plan in this new field in FORMS-H applications. See NOT-OD-21-013 and NOT-OD-22-189 for more information. Note: Although the 2023 NIH Data Management and Sharing Policy is not applicable to fellowship and institutional training grant applications, the new attachment field was added for potential future use with other plans

FORMS VERSION H SERIES

Released: August 5th, 2023

FELLOWSHIP INSTRUCTIONS FOR NIH AND OTHER PHS AGENCIES

SF424 (R&R) APPLICATION PACKAGES

GENERAL APPLICATION GUIDE FOR NIH AND OTHER PHS AGENCIES

SF424 (R&R) - Forms Version H

Released: October 25, 2022

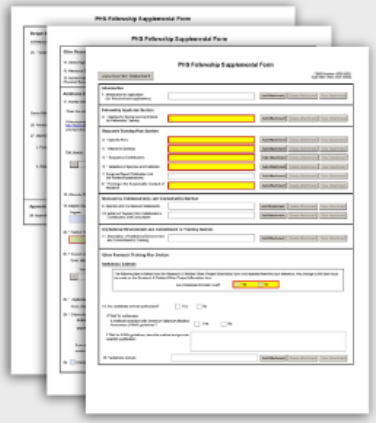
Last Revised: October 25, 2022

G.430 - PHS Fellowship Supplemental Form

The PHS Fellowship Supplemental Form is used only for fellowship applications.

This form includes fields to upload several attachments including the Specific Aims, Research Strategy, and Applicant Background and Goals.

The attachments in this form, together with the rest of your application, should include sufficient information needed for evaluation of the project and fellow, independent of any other documents (e.g., previous application). Be specific and informative, and avoid redundancies.



View larger image

Quick Links

Introduction

1. Introduction to Application (for Resubmission applications)

Fellowship Applicant Section

2. Applicant's Background and Goals for Fellowship Training

Research Training Plan Section

NIH and AHRQ Announce Upcoming Changes to Policies, Instructions and Forms for Research Training Grant, Fellowship, and Career Development Award Applications

- In describing their training goals and objectives in the Program Plan attachment, fellowship candidates will be expected to address, as applicable, any new research skills they plan to acquire in the areas of rigorous research design, experimental methods, quantitative approaches, and data analysis and interpretation.
- In the Research Strategy section of the Program Plan attachment, fellowship candidates will be expected to describe (a) the strengths and weaknesses in the rigor of the prior research that serves as the key support for the proposed project, (b) plans to address any weaknesses in the rigor of the prior research, (c) how the experimental objectives proposed will achieve robust and unbiased results, and (d) how relevant biological variables are factored into research designs and analyses.
- If applicable, fellowship candidates will be required to include the Authentication of Key Biological and/or Chemical Resources attachment.
- Applicants for diversity-related fellowship programs will be expected to attach a Description of Candidate's Contribution to Program Goals, explaining how the candidate's participation would further the goals of the program to promote diversity in health-related research.

Guidance: Rigor and Reproducibility in Grant Applications

- "**Individual fellowship applications** In describing their training goals and objectives in the Program Plan attachment, fellowship candidates will be expected to address, as applicable, any new research skills they plan to acquire in the areas of rigorous research design, experimental methods, quantitative approaches, and data analysis and interpretation.
- In the Research Strategy section of the Program Plan attachment…

Guidance: Rigor and Reproducibility in Grant Applications

NIH research grant and career development award application instructions and review language focus on four key areas:

1. The rigor of the prior research
2. Rigorous experimental design for robust and unbiased results
3. Consideration of relevant biological variables
4. Authentication of key biological and/or chemical resources

https://grants.nih.gov/policy/reproducibility/guidance.htm

For all Fellowship (F) Applications

Page Limits

Project Summary/Abstract	30 lines of text
Project Narrative	Three sentences
Introduction to Resubmission or Revision Application (when applicable)	1
Applicant's Background and Goals for Fellowship Training	6
Specific Aims	1
Research Strategy	6
Respective Contributions	1
Selection of Sponsor and Institution	1
Training in the Responsible Conduct of Research	1
Sponsor and Co-Sponsor Statements	6
Letters of Support from Collaborators, Contributors, and Consultants	6
Description of Institutional Environment and Commitment to Training Note: This page limit includes the Additional Educational Information required for F30 and F31 applications.	2
Applications for Concurrent Support (when applicable)	1
Biographical Sketch	5

https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/page-limits.htm#fell

PHS Fellowship Supplemental Form

Introduction

1. Introduction to Application (for Resubmission applications)	Required for Resubmission applications. Limited to 1 page.		Delete Attachment	View Atta

Fellowship Applicant Section

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Research Training Plan Section

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Sponsor(s), Collaborator(s), and Consultant(s) Section

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Institutional Environment and Commitment to Training Section

11. Description of Institutional Environment and Commitment to Training	Required for F05, F30, F31, F32, F33, F37, F38, FI2, F99/K00. Limited to 2 pages. Includes Additional Education Information for F30 and F31 applications.			
12. Description of Candidate's Contribution to Program Goals	Required for diversity-related funding opportunity announcements only.		ment	View Atta

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   for Fellowship Training

Research Training Plan Section

3. * Specific Aims

4. * Research Strategy

5. * Respective Contributions

6. * Selection of Sponsor and Institution

7. Progress Report Publication List
   (for Renewal applications)

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.430-phs-fellowship-supplemental-form.htm

PHS Fellowship Supplemental Form

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PHS Fellowship Supplemental Form

2. Applicant's Background and Goals for Fellowship Training (6 pages)

A. Doctoral Dissertation and Research Experience:

- In chronological order, summarize previous research and scientific experiences (not courses)
  - Include results and conclusions, publications, presentations
  - Relationship to proposed fellowship
- Graduate students:
  - Undergraduate research
  - Graduate lab rotations
  - Preliminary description of doctoral thesis research
- Post-doctoral fellows:
  - Predoctoral research
  - Previous post-doctoral research

PHS Fellowship Supplemental Form

2. Applicant's Background and Goals for Fellowship Training (6 pages)

B. Training Goals and Objectives:

- Overall training goals and how the fellowship will help you reach these goals
- Identify specific "skills, theories, conceptual approaches, etc." that will be acquired or expanded
  - Didactics (e.g., Statistics), Research and Technical Skills, Career Development Skills [e.g., presentations (oral/poster), writing]
  - "expertise in rigorous research design, experimental methods, quantitative approaches, and data analysis and interpretation"
- How the fellowship will "facilitate your transition to the next career stage"

Mentors/Advisory Committee

- Scientific area per Mentor/Committee member
- Schedule of meetings (be specific)

Research Training Mentors and Advisors		
Faculty Member	**Role**	**Area of Expertise**
Name (Title)	Mentor	
Name (Title)	Co-Mentor	
Name (Title)	Advisory Board Member	
Name (Title)	Advisory Board Member	
Name (Title)	Advisory Board Member	
Name (Title)	Collaborator	
Name (Title)	Consultant	

PHS Fellowship Supplemental Form

2. Applicant's Background and Goals for Fellowship Training (6 pages)

C. Activities Planned Under this Award:

- Fellowship activities (by year)
  - Specific for applicant and integrated with proposed research project
  - e.g., Research, Didactics, Clinical, Teaching
  - Research skills and techniques to be learned
  - Relate non-research activities (e.g., career development) to the proposed research training
- Timeline of research training and other activities
- Estimate % of time devoted to each activity

Module	Mentor(s)	Mode of learning
Scientific Area (1-3)	Specific names	Coursework (completed and new) 1-on-1 meetings (schedule? e.g., weekly) Guided readings Research meetings (schedule? e.g., weekly) Applied training Clinical experience
Career skills **Dissemination of Research Results** **Research management** **Mentorship**	All mentors and advisors	Improving communication skills Grant writing course Professional workshops/seminars Collaborations Abstracts and manuscripts Travel/Small grant application submission Supervising technical support personnel, organizing lab meetings, journal clubs e.g., training new lab members, undergraduate, summer students

Career Development Activities	Year 1	Year 2	Year 3
Mentorship			
Mentor (name)– frequency (e.g., weekly) of individual meetings, frequency of lab meetings, frequency and listing of specific journal clubs, seminars, and other recurring relevant programs	X	X	X
Co-Mentor (name) – frequency (e.g., weekly) of individual meetings, frequency of lab meetings, frequency and listing of journal clubs, seminars, and other recurring relevant programs	X	X	X
Advisory Group – frequency (e.g., quarterly) of meetings	X	X	X

Career Development Activities	Year 1	Year 2	Year 3
Experimental Training			
Mentor (name) – Specific area of research and/or methodology	X	X	X
Co-Mentor (name) – Specific area of research and/or methodology	X	X	X
Co-Investigator 1 (name) – Specific area of research and/or methodology		X	X
Co-Investigator 2 (name) – Specific area of research and/or methodology			X
Collaborator 1 (name) – Specific area of research and/or methodology		X	X
Collaborator 2 (name) – Specific area of research and/or methodology			X
Formal Coursework			
Course #1: Specific Course # / Formal Title	X		
Course #2: Specific Course # / Formal Title		X	
Rigor & Reproducibility	X		
Responsible Conduct of Research		X	
Funding for Research Activities			X

Career Development Activities	Year 1	Year 2	Year 3
Workshops & Additional Training Programs			
Cold Spring Harbor Course on.....	X		
Woods Hole Workshop on.....	X	X	
American Association for.... Junior Investigators Training on.....			X
CU Graduate School Workshop on…	X	X	X
CU Post-doc Affairs Workshop on…	X	X	X
Individual Development Plan (IDP) Workshop	X	X	X
Scientific Conferences-Communication Skills (Oral / Poster Presentations)			
Symposium of ....(annual)	X	X	X
Congress of..... (annual)		X	X
American Association for..... (annual)		X	X
Society of..... (biannual)	X		X

Career Development Activities	Year 1	Year 2	Year 3
Mentoring Skills (responsibility shared with mentors)			
Students (summer, undergraduate, medical)		X	X
Communication Skills (Written)			
Preparation of manuscripts for peer reviewed journals		X	X
Grant Writing			
CU pilot award for junior investigator	X	X	
Travel Award for…		X	X
Grant preparation and submission for next career stage			X

Biomedical Workforce Task Force

Improving graduate student and postdoctoral training

- **A. Put individual development plans in place for all trainees**
- B. Reduce the length of graduate training
- C. Provide F30 and F31 awards from all Institutes/Centers
- D. Increase postdoctoral stipends and consider policies on benefits
- E. Increase support for K99/R00 and shorten eligibility period
- F. Increase support for Early Independence Awards

http://acd.od.nih.gov/bwf.htm

Individual Development Plans

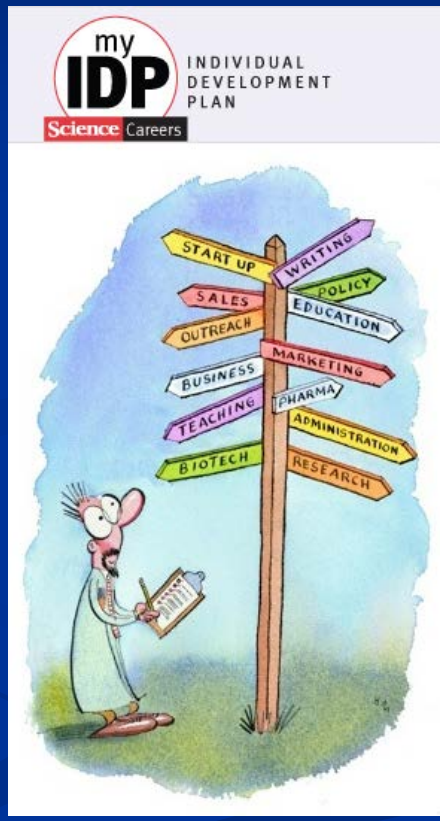
- "NIH encourages institutions to assist graduate students and postdoctoral researchers to achieve their career goals within the biomedical research workforce through the use of Individual Development Plans (IDPs)"
- "is required for all T, F, K… and other awards or award components designed to provide training and professional development opportunities for graduate students and postdoctoral researchers."

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-13-093.html
https://grants.nih.gov/grants/guide/notice-files/not-od-14-113.html

Individual Development Plans

Science Careers: myIDP:

- "myIDP is a unique, web-based career-planning tool tailored to meet the needs of PhD students and postdocs in the sciences"
- 4-step process –
  - 1: "evaluate your own skills, values, and interests…"
  - 2: "use this self-assessment as a guide for exploring and evaluating career opportunities…"
  - 3: "set some specific goals to prepare you for the career paths…
  - 4: "put the plan into place… Get started!"



http://myidp.sciencecareers.org/

PHS Fellowship Supplemental Form

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PHS Fellowship Supplemental Form

3. Specific Aims (1 page)
4. Research Strategy (6 pages total)

- Not overly ambitious
- Appropriate for the career level and of the applicant
- Appropriate for the length of the fellowship
- Achievable research goals
- Appropriate for the Mentor's expertise/background
- Appropriate for the Mentor's available funding
- Appropriate of the Institution's resources

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.430-phs-fellowship-supplemental-form.htm

PHS Fellowship Supplemental Form

3. Specific Aims (1 page)

- "Goals of the proposed research…
- Expected outcome(s)…"
- Impact of proposed research on your field(s)
- "Specific objectives…
  - Test a stated hypothesis
  - Create a novel design…
  - Solve a specific problem…
  - Challenge an existing paradigm or clinical practice…
  - Address a critical barrier to progress in the field…
  - Develop new technology"

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.430-phs-fellowship-supplemental-form.htm

PHS Fellowship Supplemental Form

4. Research Strategy (6 pages total)

- (1) Significance
  - "Importance of the problem or critical barrier to progress that the proposed project addresses"
  - "Strengths and weaknesses in the rigor of the prior research (both published and unpublished) that serves as the key support for the proposed project."
  - "How the proposed project will improve scientific knowledge, technical capability, and/or clinical practice"
  - "How the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved"

PHS Fellowship Supplemental Form

4. Research Strategy (6 pages total)

- (2) Approach
  - "Overall strategy, methodology, and analyses to be used"
  - "Plans to address weaknesses in the rigor of the prior research"
  - "Experimental design and methods proposed and how they will achieve robust and unbiased results."
  - "How the data will be collected, analyzed, and interpreted"
  - "Potential problems [challenges], alternative strategies, and benchmarks [milestones] for success"
  - Strategies "to establish feasibility, and address the management of any high risk aspects"

PHS Fellowship Supplemental Form

4. Research Strategy (6 pages total)

- (2) Approach
  - "Explain how relevant biological variables, such as sex, are factored into research designs and analyses for studies in vertebrate animals and humans."
  - Preliminary studies and results (including those collected by others in the research group)
  - Relevant previous experiences
  - Additional: e.g., human embryonic stem cells (hESC), human fetal tissue (HFT), clinical trials, hazardous situations/ procedures/materials "individual fellowships may not propose research using HFT [Human Fetal Tissue]"

https://grants.nih.gov/grants/policy/nihgps/HTML5/section_4/4.1.14_human_fetal_tissue_research.htm#Human3
https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.430-phs-fellowship-supplemental-form.htm

PHS Fellowship Supplemental Form

Introduction

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Fellowship Applicant Section

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6. * Selection of Sponsor and Institution	Required. Limited to 1 page.	Add Attachment	Delete Attachment	View Atta
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Sponsor(s), Collaborator(s), and Consultant(s) Section

9. Sponsor and Co-Sponsor Statements	Required. Limited to 6 pages.	Add Attachment	Delete Attachment	View Atta
10. Letters of Support from Collaborators, Contributors, and Consultants	Limited to 6 pages.	Add Attachment	Delete Attachment	View Atta

Institutional Environment and Commitment to Training Section

11. Description of Institutional Environment and Commitment to Training	Required for F05, F30, F31, F32, F33, F37, F38, FI2, F99/K00. Limited to 2 pages. Includes Additional Education Information for F30 and F31 applications.			
12. Description of Candidate's Contribution to Program Goals	Required for diversity-related funding opportunity announcements only.		ment	View Atta

PHS Fellowship Supplemental Form

5. Respective Contributions (1 page)

- "Describe the collaborative process between you and your sponsor/co-sponsor(s) [mentor/co-mentor] in the development, review, and editing of this Research Training Plan."
- "Discuss your respective roles in accomplishing the proposed research."
- Should be a didactic process for the applicant – i.e., doesn't develop the application with little input from the mentor.
- Mentor does not write the application

PHS Fellowship Supplemental Form

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12. Description of Candidate's Contribution to Program Goals	Required for diversity-related funding opportunity announcements only.		ment	View Atta

PHS Fellowship Supplemental Form

6. Selection of Sponsor and Institution (1 page)

- "Explain why the sponsor, co-sponsor (if any), and institution were selected to accomplish the research training goals."
- Post-doctoral Fellows: "Training is expected to broaden a fellow's perspective. Therefore, if you are requesting training at either your doctorate institution or any institution where you have been training for more than a year, you must explain why further training at that institution would be valuable."

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.430-phs-fellowship-supplemental-form.htm

PHS Fellowship Supplemental Form

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PHS Fellowship Supplemental Form

8. Responsible Conduct of Research (1 page)

- Required instructional components:
  - Format: online only is not acceptable
  - Subject Matter: e.g., required topics
  - Faculty Participation
    - e.g., Role of the Mentor and other training faculty
  - Duration of Instruction (e.g., contact hours)
  - Frequency of Instruction
    - At every career stage, at least once every four years
    - Discuss any prior instruction
  - Don't do the minimum, e.g., IRB/IACUC programs
- http://grants.nih.gov/training/responsibleconduct.htm
- https://grants.nih.gov/grants/guide/notice-files/NOT-OD-22-055.html
- https://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-019.html

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.430-phs-fellowship-supplemental-form.htm

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PHS Fellowship Supplemental Form

9. Sponsor(s) and Co-Sponsor(s) (6 pages)

- A. Research Support Available
  - Table containing detailed information on all current and pending research and research training support available to the applicant (contingency plan if there is a gap in funding)
  - Role of Sponsor(s) in the proposed integrated research and training plan
  - If more than one Sponsor, then include a plan describing their individual and coordinated roles and efforts

PHS Fellowship Supplemental Form

9. Sponsor(s) and Co-Sponsor(s) (6 pages)

- B. Sponsor's/Co-Sponsor's Previous Fellows/Trainees
  - Total number of predoctoral and postdoctoral fellows previously mentored
  - For representative five, provide information on time in sponsor's research group and on current positions. If possible, that are at the same career stage as applicant and have continued on in successful academic research careers

PHS Fellowship Supplemental Form

9. Sponsor(s) and Co-Sponsor(s) (6 pages)

- C. Training Plan, Environment, Research Facilities
  - Fellow-specific individualized research training plan
  - Addresses applicant's strengths, as well as gaps in current knowledge base and skill sets
  - Didactics, courses, seminars, workshops
  - Research environment (e.g., core facilities, equipment, laboratory, computers, research patient population)
  - Relationship of the Fellow's research/career goals to the proposed research training plan
  - Specific new skills and techniques to be acquired

PHS Fellowship Supplemental Form

9. Sponsor(s) and Co-Sponsor(s) (6 pages)

- C. Training Plan, Environment, Research Facilities
  - Career/Professional development (e.g., grant writing, presentation skills)
  - How training plan will facilitate the applicant's transition to the next career stage
  - F30: "Opportunities to integrate clinical experiences during the research training component; a plan for a smooth transition to the clinical training component"

PHS Fellowship Supplemental Form

9. Sponsor(s) and Co-Sponsor(s) (6 pages)

- D. Number of Fellows/Trainees to be Supervised During the Fellowship
  - Number of pre- and postdoctoral fellows to be mentored during the award period
- E. Applicant's Qualifications and Potential for a Research Career
  - Relate applicant's academic record and previous research experiences to the proposed research training opportunity
  - Describe how the proposed research training plan, and sponsor's expertise as a mentor, will "assist in producing an independent researcher"

PHS Fellowship Supplemental Form

9. Sponsor(s) and Co-Sponsor(s) (6 pages)

- Additional instructions if a clinical trial research experience is proposed

The NIH Announces New Review Criteria for Ruth L. Kirschstein National Research Service Award (NRSA) Individual Fellowship Applications Involving Research Experiences in Clinical Trials

Notice Number: NOT-OD-17-122

Sponsors, Collaborators, and Consultants

- *If the applicant is proposing to gain experience in a clinical trial as part of his or her research training*, is there evidence of the appropriate expertise, experience, resources, and ability on the part of the sponsor(s) to guide the applicant during the clinical trial research experience?

Research Training Plan

- *If proposed, will the clinical trial experience contribute to the proposed project and/or the applicant's research training*?

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-17-122.html

PHS Fellowship Supplemental Form

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PHS Fellowship Supplemental Form

10. Letters of Support from Collaborators, Contributors, and Consultants (6 pages)

- Collaborators, consultants, advisors, director of core facility, statistician, provider of unique research resource, instructor of unique technique/technology, referring physician, etc.
- Letter describing their role and contribution to the applicant's proposed project, research training, career development, and future career goals
- Signed on letterhead stationery
- Sometimes, NIH Biosketch is included (other section)

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.430-phs-fellowship-supplemental-form.htm

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PHS Fellowship Supplemental Form

11. Description of Institutional Environment and Commitment to Training (2 pages)

- Description of a robust research program relevant to the applicant's areas of interest
- Opportunities for collaborations, courses, journal clubs, seminars, workshops, presentations, etc.
- Appropriate facilities and resources available for academic, research, and career development activities
- Refer to "Facilities/Resources" and "Sponsor's Statement" sections

PHS Fellowship Supplemental Form

11. Description of Institutional Environment and Commitment to Training (2 pages)

- Instruction in "rigorous experimental design to ensure reproducibility"
- Institution-wide resources
  - Students: Office of Graduate Affairs
  - Post-doctoral Fellows: Office of Post-doctoral Affairs

PHS Fellowship Supplemental Form

11. Description of Institutional Environment and Commitment to Training (2 pages)

- Additional Educational Info – F31/F30 applications
  - Description of graduate/degree-granting program
    - Structure of the program
    - Description of and timeline of required milestones
      - Courses, Qualifying exam, Teaching, Clinical requirements (e.g., F30)
  - Average time to degree over the past 10 years
  - Applicant's progress in relation to the program's timeline
  - How program (e.g., frequency/method) evaluates and monitors student's progress (e.g., committee meetings)
  - Usually provided by the graduate program's director/ department chair (include name and title)

Biomedical Workforce Task Force

Improving graduate student and postdoctoral training

- A. Put individual development plans in place for all trainees
- **B. Reduce the length of graduate training**
- C. Provide F30 and F31 awards from all Institutes/Centers
- D. Increase postdoctoral stipends and consider policies on benefits
- E. Increase support for K99/R00 and shorten eligibility period
- F. Increase support for Early Independence Awards

http://acd.od.nih.gov/bwf.htm

PHS Fellowship Supplemental Form

11. Description of Institutional Environment and Commitment to Training (2 pages)

- Additional Educational Information – F30 applications
  - Clinical didactic programs during the graduate research years
  - Programs to facilitate the transition from graduate/research training (PhD) period to the clinical training (MD) years
  - Research-related programs during the clinical training years

PHS Fellowship Supplemental Form

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PHS Fellowship Supplemental Form

12. Description of Candidates Contribution to Program Goals

- Required for those applying to "Diversity-Related" programs
  - e.g., F31 "Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research"
- Institutional document (on letterhead) addressing "how the candidate's participation will further the goals of the fellowship program to promote diversity in health-related research"
- Confidential information not to be included (e.g., specific disability or racial/ethnic background)

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.430-phs-fellowship-supplemental-form.htm

RESEARCH & RELATED Other Project Information

OMB Number: 4040-0001
Expiration Date: 12/31/2022

1. Are Human Subjects Involved? Yes No

1.a. If YES to Human Subjects

Is the Project Exempt from Federal regulations? Yes No

If yes, check appropriate exemption number. 1 2 3 4 5 6 7 8

If no, is the IRB review Pending? Yes No

IRB Approval Date:

Human Subject Assurance Number:

2. Are Vertebrate Animals Used? Yes No

2.a. If YES to Vertebrate Animals

Is the IACUC review Pending? Yes No

IACUC Approval Date:

Animal Welfare Assurance Number:

10. Facilities & Other Resources

3. Is proprietary/privileged information included in the application? Yes No

4.a. Does this Project Have an Actual or Potential Impact - positive or negative - on the environment? Yes No

4.b. If yes, please explain:

4.c. If this project has an actual or potential impact on the environment, has an exemption been authorized or an environmental assessment (EA) or environmental impact statement (EIS) been performed? Yes No

4.d. If yes, please explain:

5. Is the research performance site designated, or eligible to be designated, as a historic place? Yes No

5.a. If yes, please explain:

6. Does this project involve activities outside of the United States or partnerships with international collaborators? Yes No

6.a. If yes, identify countries:

6.b. Optional Explanation:

7. Project Summary/Abstract — Add Attachment | Delete Attachment | View Attachment

8. Project Narrative — Add Attachment | Delete Attachment | View Attachment

9. Bibliography & References Cited — Add Attachment | Delete Attachment | View Attachment

10. Facilities & Other Resources — Add Attachment | Delete Attachment | View Attachment

11. Equipment — Add Attachment | Delete Attachment | View Attachment

12. Other Attachments — Add Attachments | Delete Attachments | View Attachments

R&R Other Project Information:

10. Facilities & Other Resources

Scientific/Technical Resources

- Facilities to be used for the conduct of the proposed research
  - Laboratory
  - Animal
  - Computer
  - Office
  - Clinical [patient/research subject populations]
  - Other: Core facilities [e.g., research pharmacy, biostatistics, technical cores (microscopy, biomarkers), biohazards]
- Discuss how the proposed studies will benefit from unique features of the scientific environment, subject populations, or collaborative arrangements

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.220-r&r-other-project-information-form.htm

R&R Other Project Information:

10. Facilities & Other Resources

Career Development Resources

- More complete descriptions of programs referenced in:
  - 2. Applicant's Background and Goals for Fellowship Training - C. Activities Planned Under this Award
  - 6. Selection of Sponsor and Institution
  - 9. Sponsor(s) and Co-Sponsor(s) - C. Training Plan, Environment, Research Facilities
  - 11. Description of Institutional Environment and Commitment to Training
- Helps establish the feasibility of the training plan
- Cannot be used to avoid page limitations of other application sections

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.220-r&r-other-project-information-form.htm

R&R Other Project Information:

10. Facilities & Other Resources

Career Development Resources

- Career development programs
  - Institutional
    (e.g., Office of Postdoctoral or Graduate Affairs)
  - Departmental
  - Professional societies
- Formal didactics
  - Degree program
  - Scientific courses: e.g., Statistics
  - Career Development courses: e.g., Funding & Grantsmanship
- Workshops, webinars, other training programs

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.220-r&r-other-project-information-form.htm

Letters of Reference

- Include a list of Referees in the Cover Letter
- 3-5 Letters of References are required
- Individuals who know you well from a research perspective (qualifications, training, and interests)
- Individuals not directly involved in the research project
- Mentor(s) cannot be one of the confidential Letters of Reference ("letter" in main body of application)
- Helpful to include at least one referee who is not in your current department/institution

https://grants.nih.gov/grants/how-to-apply-application-guide/submission-process/reference-letters.htm

Letters of Reference

- "Research ability and potential to become an independent researcher
- Adequacy of scientific and technical background
- Written and verbal communication abilities including ability to organize scientific data
- Quality of research endeavors or publications to date, if applicable
- Perseverance in pursuing goals
- Evidence of originality
- Need for further research experience and training
- Familiarity with research literature"

https://grants.nih.gov/grants/how-to-apply-application-guide/submission-process/reference-letters.htm

Reference Letters vs. Letters of Support: What's the Difference?

Reference Letters	Letters of Support
When are they used?	
Used in Fellowships, mentored Career Development Awards, and other programs as requested	Used to demonstrate: -Institutional commitment or resources -Collaboration or role in the project -Potential or current user of a resource or service proposed in the application
Who writes them?	
Referees should be individuals not directly involved in the application, but who are familiar with the applicant's qualifications. The sponsor/co-sponsor(s) cannot be counted toward the 3 required references.	Collaborators, key personnel, institution, and other significant contributors to the scientific development or execution of the project
-Describe qualities and potential of candidate -Letters can be addressed to "To Whom It May Concern" or "Dear Reviewer"	-Describe the type of support your collaborators will provide to the project -Summarize the agreements you have in place to support your project
Who submits them?	
A referee submits the letters through eRA Commons (no login needed). The letters are maintained separate from the corresponding application.	Applicant organization submits the letters of support as part of the application.
Who sees them?	
Only reviewers and select NIH staff	Anyone with access to view the application
Where are the instructions?	
-Reference Letters page -Special instructions may also be found in funding opportunity announcements and notices	-"Application form instructions" on the How to Apply – Application Guide page. -Special instructions may also be found in funding opportunity announcements and notices (including Notices of Special Interest)

https://nexus.od.nih.gov/all/2019/09/11/reference-letters-vs-letters-of-support-whats-the-difference/

SF 424 (R&R) APPLICATION FOR FEDERAL ASSISTANCE Page 2

21. Cover Letter Attachment [ ] Add Attachment

21. Cover Letter Attachment

- Must include
- Title of application
- Title of funding opportunity announcement
- List of Referees (name and affiliation)
- Administrative document – not seen by reviewers

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.200-sf-424-(r&r)-form.htm

Biosketch Format Pages, Instructions and Samples

- Biosketch topic page
- FAQs
- Learn whether a particular activity should be reported in the biosketch, other support, or annual progress reports: NIH Pre-award and Post-award Disclosures Relating to the Biographical Sketch and Other Support
- Format Attachments (fonts, margins, page limits, etc.)
- Related Topics:
  - Other Support topic page
  - Annual Progress Reports (RPPR)

Try SciENcv to help you develop your biosketch and automatically format it according to NIH requirements.

Note: Only the OMB Expiration Date has changed since FORMS-G version. FORMS-G and FORMS-H versions are both acceptable.

Updated Date

May 2023

https://grants.nih.gov/grants/forms/biosketch.htm

Biographical Sketch

- Students/Post-docs are considered the PI of their NIH Fellowship application (F's)
- Student/Post-doc PI of NIH Fellowship application uses a different NIH Biosketch format, as compared to all other "roles"
- Everyone else in the application uses the "usual" NIH Biosketch format
  - Mentor(s), Collaborators, Co-investigators, Advisors
- https://grants.nih.gov/grants/forms/biosketch.htm
- https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.240-r&r-seniorkey-person-profile-(expanded)-form.htm

ADMINISTRATIVE NOTE:
During the review of this application, reviewers and/or NIH staff noted that one or more biosketches did not comply with the required format (NOT-OD-15-032). An electronic notification has been sent to the contact Program Director/Principal Investigator and Signing Official for this application, to ensure that future applications use the correct biosketch format. NIH has the authority to withdraw such applications from review or consideration for funding.

- Keep Yours Current!
- Include all information that is relevant – even if mentioned/discussed elsewhere in the application
- "Stand alone" document that conveys to the reviewers everything you want them to know about you
- Up to 5 pages in length total

- Used by reviewers to assess the qualifications of the Mentor, collaborator, co-investigator, Advisor, etc. in terms of their proposed role in the applicant's training, in addition to the overall competence of the entire "team"
- Make sure that the NIH Biosketches others give you for your application are current (information and format) and programmatically appropriate

NIH Biosketch for Fellowship Applications

- "Special" NIH Biosketch for Fellowship (F) applicants
- A. Personal Statement
- B. Positions, Scientific Appointments, and Honors
  - Scholarships, Fellowships, Traineeships
- C. Contributions to Science
  - Highlight those most important (2-3)
    - High School Research, Undergraduate Research, Graduate Research, Postdoctoral Research
- D. Scholastic Performance (courses and grades)
  - Graduate students: graduate and undergraduate
  - Postdoctoral fellows: professional and graduate
- https://grants.nih.gov/grants/forms/biosketch.htm

OMB No. 0925-0001 and 0925-0002 (Rev. 10/2021 Approved Through 01/31/2026)

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME:

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE:

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Start Date MM/YYYY	Completion Date MM/YYYY	FIELD OF STUDY

A. Personal Statement

B. Positions, Scientific Appointments and Honors

C. Contributions to Science

D. Scholastic Performance

YEAR	COURSE TITLE	GRADE

https://grants.nih.gov/grants/forms/biosketch.htm

OMB No. 0925-0001 and 0925-0002 (Rev. 12/2020 Approved Through 02/28/2023)

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME:Simmons-Gonzales, Leilani

eRA COMMONS USER NAME (credential, e.g., agency login): SimmonsL

POSITION TITLE: Graduate Student Research Assistant

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Start Date MM/YYYY	Completion Date MM/YYYY	FIELD OF STUDY
Purdue University	BA	08/2014	05/2018	Biological Chemistry
UC San Diego	PHD	08/2018	05/2023 (Expected)	Molecular Biology

https://grants.nih.gov/grants/forms/biosketch.htm

A. Personal Statement

I first became interested in human health and disease in high school when I was awarded an NIH Diversity Supplement to work as a research technician for two summers in Dr. Indira Creative's lab at the University of Hawaii. I continued to pursue this interest as an undergraduate at Purdue University, where I conducted research with Dr. Daniel Richardson on the mechanisms of action of a new class of small molecules for cancer treatment. This resulted in a co-authorship publication, as well as an invitation to present a poster at the annual Oncological meeting in Denver, Colorado. By the end of my undergraduate career, I knew that I wanted to pursue a long-term career in research. For my graduate training at UC San Diego, I have moved into the fields of genetics and biochemistry by studying the signaling and motility mechanisms of cancer cells, under the mentorship of Dr. Nani Green. Dr. Green is an internationally recognized leader in the field of cancer genetics and has an extensive record for training predoctoral and postdoctoral fellows. Along with giving me new conceptual and technical training, the proposed training plan outlines a comprehensive set of career development activities and workshops. I will have opportunities to engage in public speaking, conduct literature analysis, consider biomedical ethics, and learn about varied career options. For my initial project, I am currently developing a novel protocol for the identification of transcription complexes involved in cancer signaling pathways, which I hope to submit as a first author publication in the next few months. As a native Hawaiian, I am the first in my family to graduate from college, and I am excited to continue making great strides with my education. Overall, I believe that my current research setting in conjunction with my proposed training plan will provide a solid foundation for my long-term goal to become an academic researcher.

1. Nieman PY, **Simmons-Gonzales L**, Richardson, D. Gen Y: a novel small molecule with cytotoxic abilities targeting colon cancer cells. Cellular and Molecular Biology. 2018 June. 7(20):13672-78.

https://grants.nih.gov/grants/forms/biosketch.htm

B. Positions, Scientific Appointments, and Honors

Positions and Scientific Appointments

2019 – 2020	Robertson Fellowship for Outstanding Graduate Students, Genetics Department, UC San Diego
2018 – Present	Graduate Research Assistant, UC San Diego
2016 – 2018	Lab Technician, University of Hawaii
2014 – Present	Member, Association for Women in Science
2014 – Present	Member, Sigma Xi
2014 – 2016	Diversity Supplement, National Institutes of Health

Honors

2020	Virtual Poster Presenter, Genetics and Molecular Biology Meeting
2019	Poster Presenter, Advances in Cancer Research and Therapy Meeting
2018	Paula F. Laufenberg award for best senior project in the Biology Department, Purdue University
2014 – 2018	Scholarship, National Merit Scholarship Program
2014	Scholarship, Daughters of Hawaii Society

https://grants.nih.gov/grants/forms/biosketch.htm

C. Contributions to Science

2. **High School Research:** I spent two summers doing research in the laboratory of Dr. Indira Creative at University of Hawaii, funded by a NIH Diversity Supplement award. Dr. Creative has developed several new anti-fungal drugs that might protect against skin infections. Over the course of two summers I set up in vitro cultures of skin cell lines and conducted a wide range of toxicity assays. We were excited to find that one of the new agents showed almost no toxicity, even at fairly high doses. Dr. Creative is now testing the drug in animals exposed to different types of fungal infections, including *Candida albicans*.
   1. Footman B, Eisser JK, **Simmons-Gonzales, L**, Creative IM. Testing XXH for toxicity in vitro. University of Hawaii Research Symposium; 2012 May; Manoa, HI.
3. **Undergraduate Research:** I was part of a project in the laboratory of Dr. Daniel Richardson at Purdue University. Dr. Richardson's laboratory studies the mechanisms of action of small molecules for cancer treatment. During my time in his lab I was looking at how a new small molecule, Gen Y, is able to target cancerous cells. My contributions to this work were included in a publication recently accepted in Cellular and Molecular Biology. The work was particularly exciting because it looks like the mechanism of action of Gen Y might be completely novel, making it a potential candidate for treating patients afflicted with colon cancer. Dr. Richardson was recently awarded a patent for this new drug.
   1. Nieman PY, **Simmons-Gonzales L**, Richardson, D. Gen Y: a novel small molecule with cytotoxic abilities targeting colon cancer cells. Cellular and Molecular Biology. 2018 June. 7(20):13672-78.
   2. **Simmons-Gonzales, L**, Richardson, D. Testing the ability of a small molecule, Gen Y, to target colon cancer cells. Advances in Cancer Research and Therapy; 2019 September; Denver, CO.
4. **Graduate Research**: My ongoing predoctoral research is focused on transcriptional gene regulation and signaling impacting motility of cancer cells. I believe the results from my research will likely be highly relevant to human health as they will provide new details into the workings of complex biological systems, which will allow for further extrapolations into the development of several types of cancer and their progression. I am currently developing a novel protocol for the identification of transcription complexes involved in cancer signaling pathways, which I hope to submit as a first author publication in the next few months.
   1. **Simmons-Gonzales, L**, Green, N. A tandem identification approach for transcriptional complexes involved in the signaling and motility of cancerous cells. Genetics and Molecular Biology Virtual Meeting; 2020 September

"For each contribution, you may cite up to four publications or research products that are relevant to the contribution. If you are not the author of the product, indicate what your role or contribution was. Note that while you may mention manuscripts that have not yet been accepted for publication as part of your contribution, you may cite only published papers to support each contribution. Research products can include audio or video products… conference proceedings such as meeting abstracts, posters, or other presentations; patents; data and research materials; databases; educational aids or curricula; instruments or equipment; models; protocols; and software or netware. Use of hyperlinks and URLs to cite these items is not allowed."

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.240-r&r-seniorkey-person-profile-(expanded)-form.htm#Instructions

D. Scholastic Performance

YEAR	COURSE TITLE	GRADE
	PURDUE UNIVERSITY	
2014	Introductory Biology	A
2014	Introductory Biology Lab	A
2014	Foundations of Chemical Principles	A
2014	French and Francophone World	A
2014	Ethics, Religion, and Culture Today	A
2015	Organismal and Population Biology	B
2015	Omics	B
2015	First Year Seminar: Nation and Migration	A
2015	Statistics, Probability, and Reliability	A
2015	Calculus I	B
2015	General Physics I	B
2015	Introductory Chemistry	A
2015	Population & Ecol Genetics	A
2015	Organic Chemistry	B

https://grants.nih.gov/grants/forms/biosketch.htm

UC SAN DIEGO

2018	Seminar in Genetics	P
2018	Statistics for the Life Sciences	P
2018	Ethics in Biological Research	CRE
2019	Seminar in Physiology and Behavior	P
2019	Cancer Immunology	P
2020	Mechanisms of Cell Motility	P
2020	Biochemical Mechanisms of Cancer Cells	P
2020	Toxicology	P
2020	Physiology for the Molecular Biologist	P

Except for the scientific ethics course, UC San Diego graduate courses are graded P (pass) or F (fail). Passing is C plus or better. The scientific ethics course is graded CRE (credit) or NC (no credit). Students must attend at least seven of the eight presentation/discussion sessions for credit.

https://grants.nih.gov/grants/forms/biosketch.htm

Human Subjects/Clinical Trials Info - changes

- For applications with deadlines on or after January 25, 2019
- "NIH Policy and Guidelines on the Inclusion of Children. Changes to the policy include (1) the applicability of the policy to individuals of all ages, including children and older adults; (2) clarification of potentially acceptable reasons for excluding participants based on age; and (3) a requirement to provide data on participant age at enrollment in progress reports.
- "NIH Policy and Guidelines on the Inclusion of Individuals Across the Lifespan as Participants in Research Involving Human Subjects"

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-116.html
https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-227.html

Human Subjects/Clinical Trials Info - changes

Human Subjects and Clinical Trials Information	Section 2 – Study Population Characteristics	2.4 Inclusion of Women, Minorities, and Children	2. Inclusion of Children [References to the Inclusion of Children in Clinical Research policy]	2. Inclusion Across the Lifespan [References to Inclusion of Children replaced with Inclusion Across the Lifespan]

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-116.html
https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-227.html

NIH "F" Sites of Interest

- Program Announcements for Dual Degree: F30, Pre-Doc: F31 and F31-Diversity, and Post-doc: F32 grant mechanisms
  https://researchtraining.nih.gov/programs/fellowships
- Fellowship Application Instructions
  https://grants.nih.gov/grants/how-to-apply-application-guide.html
  https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.100-how-to-use-the-application-instructions.htm
- Reference Letters
  https://grants.nih.gov/grants/how-to-apply-application-guide/submission-process/reference-letters.htm

NIH "F" Sites of Interest

- Application Page Limits
  https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/page-limits.htm
- Formatting of Attachments (fonts, margins, etc.)
  https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/format-attachments.htm
- NIH Biosketch Format Pages, Instructions and Samples
  https://grants.nih.gov/grants/forms/biosketch.htm

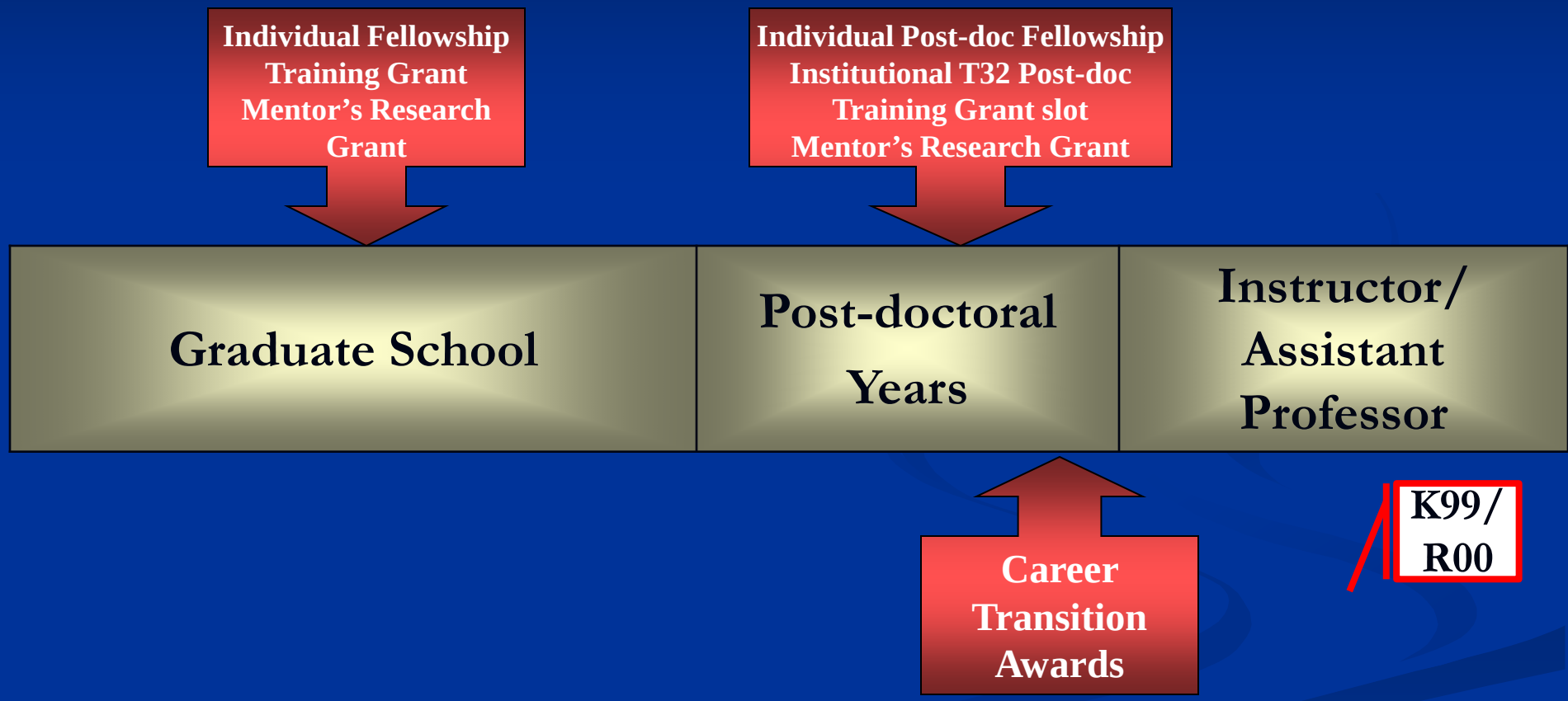
NIH "F" Sites of Interest

- Instruction in the Responsible Conduct of Research
  https://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-019.html
  https://grants.nih.gov/grants/guide/notice-files/NOT-OD-22-055.html
- NIH Research Training and Career Development Programs
  https://researchtraining.nih.gov/
- Research Training and Career Development Programs at Specific Institutes
  https://researchtraining.nih.gov/institute

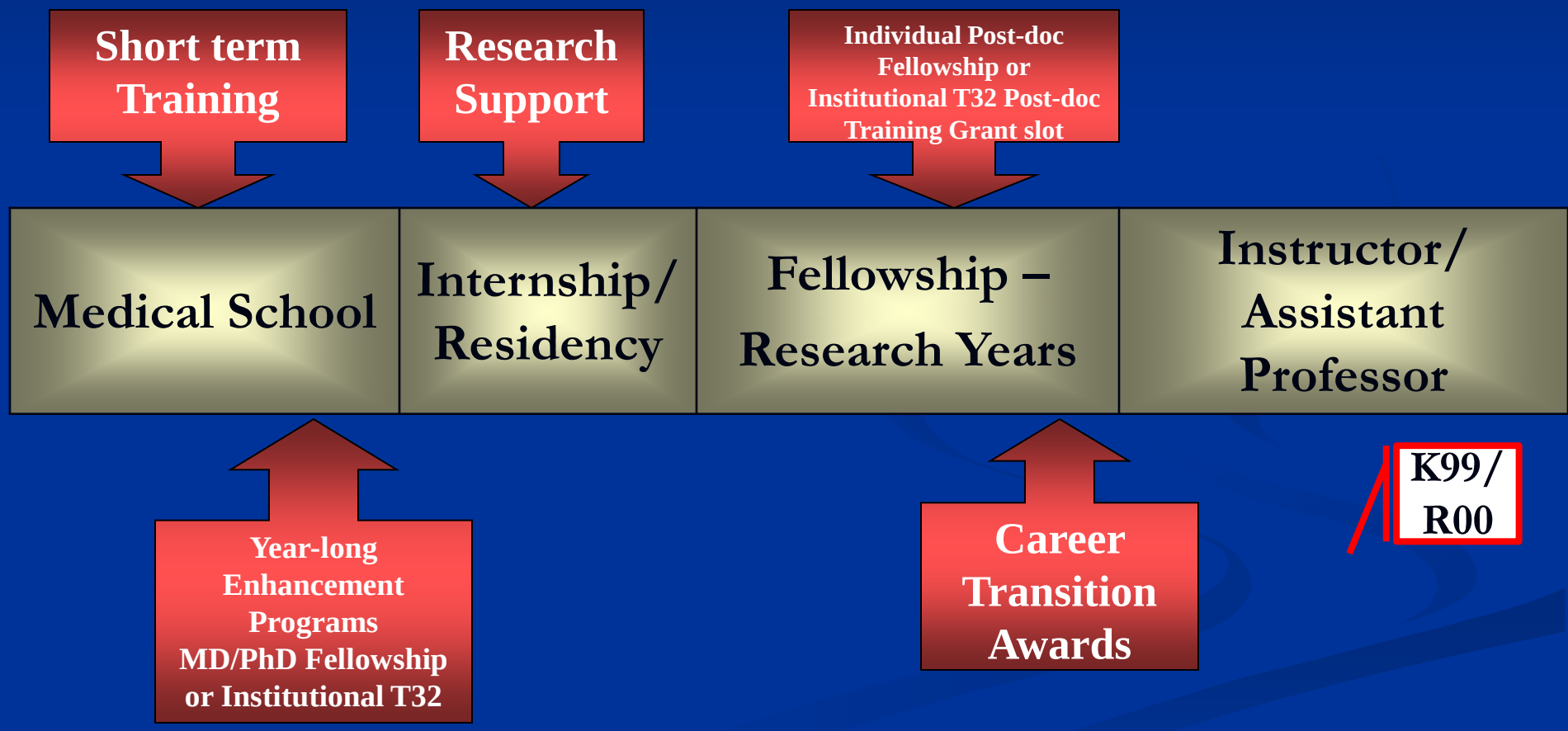
Topics to be Discussed

- Individual Fellowship Programs
  - Overview of Programs and Funding Agencies
  - NIH Review Process, Criteria, and Scoring System
  - Components of an NIH Application
- **Career Transition Funding Programs**
- Junior Faculty Career Development Programs
  - Overview of Programs and Funding Agencies
  - NIH Review Process, Criteria, and Scoring System
  - Components of an NIH Application

Timeline of NIH Funding for Junior Investigators



Timeline of NIH Funding for Junior Investigators



Parent Announcements (For Unsolicited or Investigator-Initiated Applications)

Career Development (K) Announcements

K99/R00	NIH Pathway to Independence Award (Parent K99/R00 Independent Clinical Trial Required)	PA-20-187
K99/R00	NIH Pathway to Independence Award (Parent K99/R00 Independent Clinical Trial Not Allowed)	PA-20-188
K99/R00	NIH Pathway to Independence Award (Parent K99/R00 Independent Basic Experimental Studies with Humans Required)	PA-20-189

Expiration Date **New Date** May 8, 2024

https://grants.nih.gov/grants/guide/parent_announcements.htm

NIH Pathway to Independence Award (Parent K99/R00 Independent Clinical Trial Not Allowed)

Funding Opportunity Announcement (FOA) Number	PA-20-188

The purpose of the NIH Pathway to Independence Award (K99/R00) program is to increase and maintain a strong cohort of new and talented, NIH-supported, independent investigators. This program is designed to facilitate a timely transition of outstanding postdoctoral researchers with a research and/or clinical doctorate degree from mentored, postdoctoral research positions to independent, tenure-track or equivalent faculty positions. The program will provide independent NIH research support during this transition in order to help awardees to launch competitive, independent research careers.

https://grants.nih.gov/grants/guide/pa-files/PA-20-188.html

Pathway to Independence Award

- Career Transition Award (K99/R00)
- No citizenship requirement
- Applicants must:
  - Have earned a clinical or research doctorate
  - "Have no more than 4 years of related postdoctoral research training at the time of initial application or resubmission"
  - Have not been the principal investigator "on NIH research grants (e.g. R01, R03, R21), NIH career development awards (e.g., K01, K07, K08, K23, K25), or other peer-reviewed NIH or non-NIH research grants over $100,000 direct costs per year, or Project Leads on sub-projects of program project (P01) or center (P50) grants."

https://researchtraining.nih.gov/programs/career-development/k99-r00

Pathway to Independence Award

- 1-2 years as a mentored K award for "post-docs"
  - Salary and Research Support (Institute-specific)
  - 75% effort
- 3 years as a Research award for independent investigators
  - Total/year:=$249,000 (salary and research expenses)
    - D.C. + institution's I.C. rate
  - Must have an independent research position

https://researchtraining.nih.gov/programs/career-development/k99-r00

Pathway to Independence Award

"Eligibility Window"

"no more than 4 years of postdoctoral research experience as of the relevant application due date regardless of whether it is a new or resubmission application…

must be in mentored, postdoctoral training positions to be eligible"

"Parental, medical, or other well-justified leave for personal or family situations of generally less than 12 months duration is not included in the 4-year eligibility limit,

nor is clinical training with no research involvement (e.g., full-time residency training).

NIH will approve an extension of one year for childbirth within the 4 year K99 eligibility window...

Only time dedicated to research activities would count toward the 4-year limit."

https://grants.nih.gov/grants/guide/pa-files/PA-20-188.html

Pathway to Independence Award

"Candidates for the K99/R00 are strongly encouraged to obtain confirmation of their eligibility from the relevant IC before they begin to prepare their applications. It is incumbent upon the candidate to provide evidence that they meet all of the eligibility criteria…

Additional clarifications are provided under Frequently Asked Questions.

Potential candidates are encouraged to discuss their individual situation with an NIH Institute or Center Scientific Program Contact before applying."

Frequently Asked Questions (FAQs)

New Investigators Program - Pathway to Independence Award

Table of IC-Specific Information, Requirements and Staff Contacts

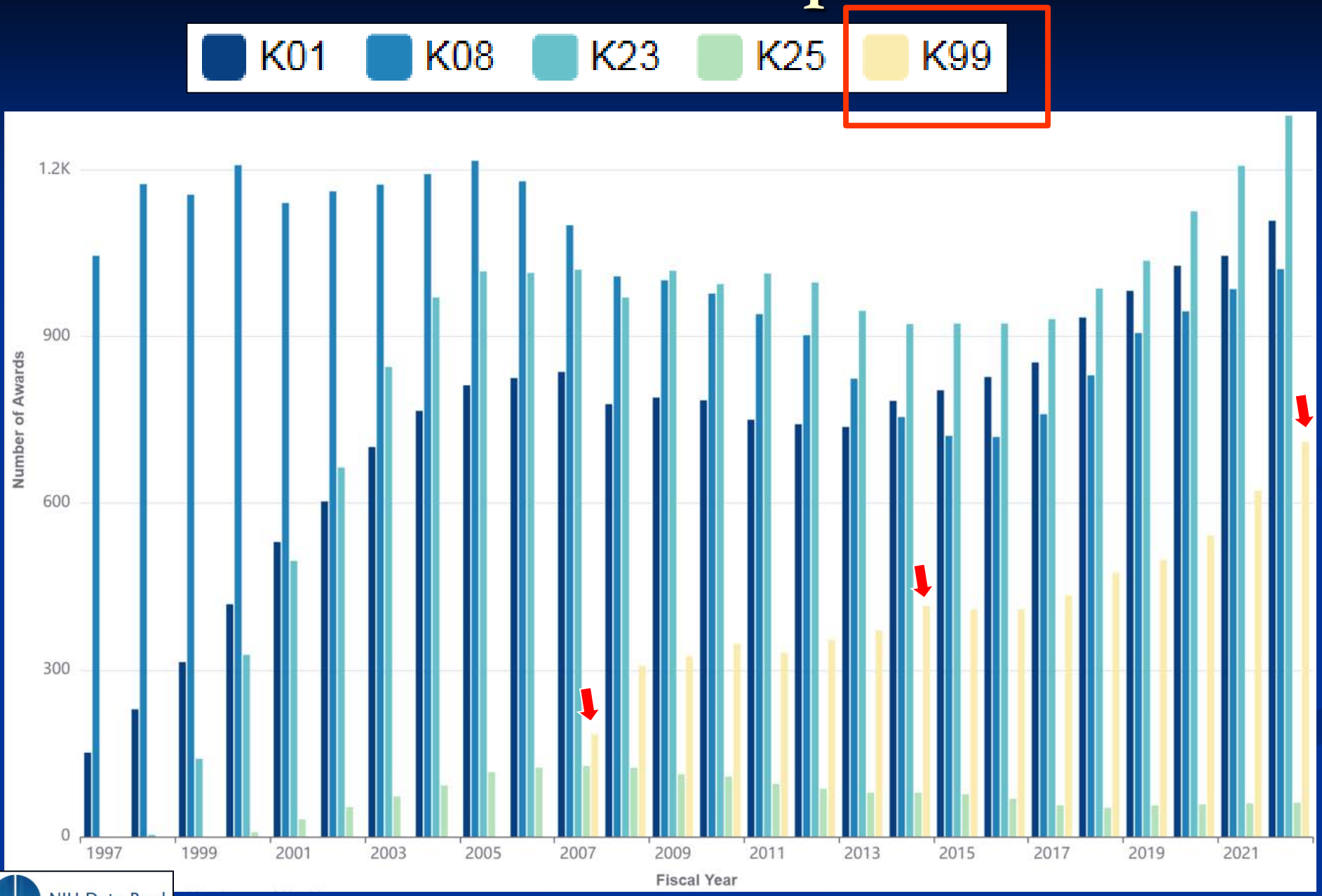
Release Date: May 5, 2020

Expiration Date: **New Date** May 8, 2024

NIH Institute or Center Contacts	Institute/Center Specific Information

https://grants.nih.gov/faqs#/New-Investigators-Program
https://grants.nih.gov/grants/guide/pa-files/PA-20-188.html

Research Career Development Awards



NIH Data Book

Fiscal Year	Activity Code	NIH Institute / Center	Number of Applications Reviewed	Number of Applications Awarded	Success Rate[1]	Total Funding[2]
2022	K99	NCI	236	42	17.8%	$5,398,961
2022	K99	NHLBI	174	41	23.6%	$5,354,922
2022	K99	NIDCR	36	10	27.8%	$1,191,137
2022	K99	NIDDK	70	12	17.1%	$1,088,460
2022	K99	NINDS	133	29	21.8%	$3,506,704
2022	K99	NIAID	89	22	24.7%	$2,516,949
2022	K99	NIGMS	161	46	28.6%	$4,556,957
2022	K99	NICHD	96	27	28.1%	$3,284,649
2022	K99	NEI	44	9	20.5%	$1,042,231
2022	K99	NIEHS	51	10	19.6%	$1,057,598
2022	K99	NIA	129	44	34.1%	$5,278,620
2022	K99	NIAMS	39	12	30.8%	$1,190,073
2022	K99	NIDCD	21	7	33.3%	$813,583
2022	K99	NIMH	93	21	22.6%	$2,502,729
2022	K99	NIDA	57	10	17.5%	$1,528,484
2022	K99	NIAAA	37	18	48.6%	$2,736,707
2022	K99	NINR	12	1	8.3%	$129,654
2022	K99	NHGRI	18	10	55.6%	$1,189,396
2022	K99	NIBIB	22	6	27.3%	$602,010
2022	K99	NCCIH**	6	0	0.0%	$0
2022	K99	NIMHD***	19	7	36.8%	$817,640
2022	K99	NLM	8	1	12.5%	$89,644
2022	**K99**	**ACTIVITY TOTAL**	**1,551**	**385**	**24.8%**	**$45,877,108**

NIH (RePORT)

https://report.nih.gov/success_rates/index.aspx

Research Portfolio Online Reporting Tools (RePORT)

Fiscal Year	Activity Code	NIH Institute / Center	Number of Applications Reviewed	Number of Applications Awarded	Success Rate[1]	Total Funding[2]
2013	K99	NHLBI	112	25	22.3%	$2,680,777
2014	K99	NHLBI	167	40	24.0%	$4,590,006
2015	K99	NHLBI	111	27	24.3%	$3,094,830
2016	K99	NHLBI	124	32	25.8%	$4,066,065
2017	K99	NHLBI	99	24	24.2%	$3,072,290
2018	K99	NHLBI	113	28	24.8%	$3,341,524
2019	K99	NHLBI	112	33	29.5%	$4,096,354
2020	K99	NHLBI	133	31	23.3%	$4,269,580
2021	K99	NHLBI	139	36	25.9%	$4,831,804
2022	K99	NHLBI	174	41	23.6%	$5,354,922

Success Rates

https://report.nih.gov/success_rates/index.aspx

Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) Postdoctoral Career Transition Award to Promote Diversity (K99/R00 - Independent Clinical Trial Not Allowed)

National Institute of General Medical Sciences (NIGMS)

National Eye Institute (NEI)

National Heart, Lung, and Blood Institute (NHLBI)

National Human Genome Research Institute (NHGRI)

National Institute on Aging (NIA)

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

National Institute of Allergy and Infectious Diseases (NIAID)

National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)

National Institute of Biomedical Imaging and Bioengineering (NIBIB)

National Institute on Deafness and Other Communication Disorders (NIDCD)

National Institute of Dental and Craniofacial Research (NIDCR)

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

National Institute on Drug Abuse (NIDA)

National Institute of Environmental Health Sciences (NIEHS)

National Institute of Mental Health (NIMH)

National Institute of Neurological Disorders and Stroke (NINDS)

National Institute of Nursing Research (NINR)

National Institute on Minority Health and Health Disparities (NIMHD)

National Library of Medicine (NLM)

National Center for Complementary and Integrative Health (NCCIH)

Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)

All applications to this funding opportunity announcement should fall within the mission of the Institutes/Centers. The following NIH Offices may co-fund applications assigned to those Institutes/Centers.

Office of Research on Women's Health (ORWH)

Office of Behavioral and Social Sciences Research (OBSSR)

https://grants.nih.gov/grants/guide/pa-files/PAR-21-271.html

Career Transition Awards

- **Howard Hughes Medical Institute: Hanna H. Gray Fellows program**
  - "seeks to increase diversity in the professoriate by supporting early career researchers who show exceptional promise of becoming academic scientists"
  - "basic science researcher or physician-scientist in the biological and biomedical sciences"
    - Postdoctoral phase: "initial salary support of $80,000, with anticipated annual increases… $20,000 annual expense allowance... minimum of two and maximum of four years."
    - Faculty phase: "support for up to four years… $270,000, allocated for research costs ($250,000) and an expense allowance ($20,000)"

https://www.hhmi.org/programs/hanna-h-gray-fellows

Career Transition Awards

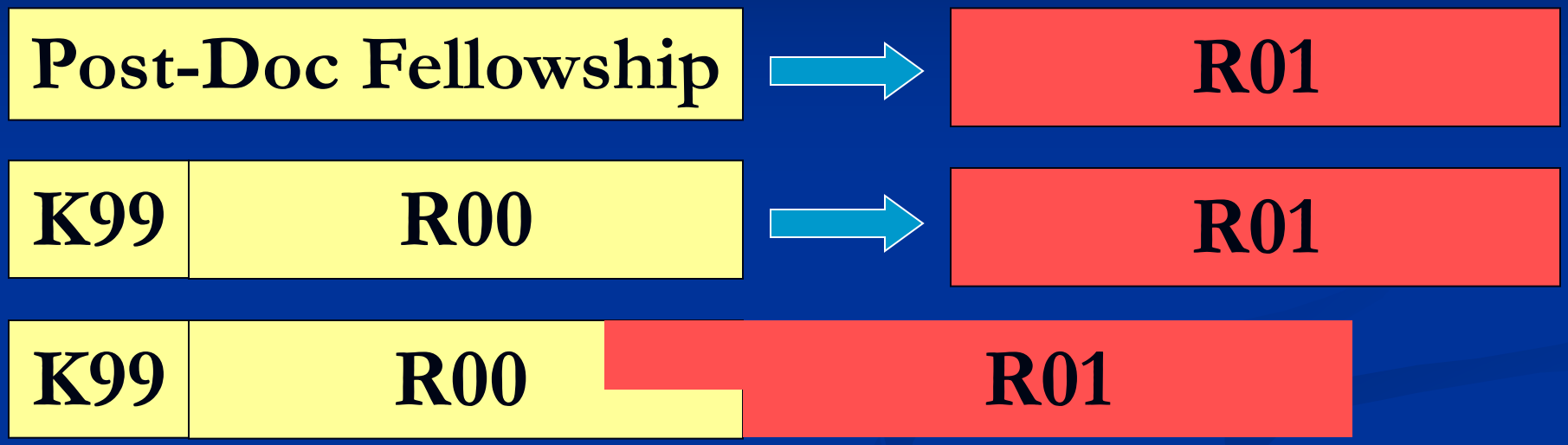
- **Burroughs Wellcome Fund: Career Awards for Medical Scientists**
  - "Provides support to facilitate the transition from mentored position to independence for the early career physician scientist"
  - Candidates with an M.D., D.O., D.D.S., or D.V.M. degree
  - 75% effort to research-related activities
  - Funding: $700,000 over five years
    - Postdoctoral/Fellowship Portion: Years 1 and 2
      Annual Total: $95,000
    - Faculty Portion of the Award: Years 3-5
      Annual Total: $170,000

https://www.bwfund.org/grant-programs/biomedical-sciences/career-awards-medical-scientists

Career Transition Award (K22)

- NCI, NIAID: Transition from mentored, non-independent research position to independent faculty (or equivalent) position
- NCI, NINDS: Diversity candidates

Post-doc Fellowship/ Career Transition Support to Independent Research Grant (R01)



Topics to be Discussed

- Individual Fellowship Programs
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- Career Transition Funding Programs
- **Junior Faculty Career Development Programs**
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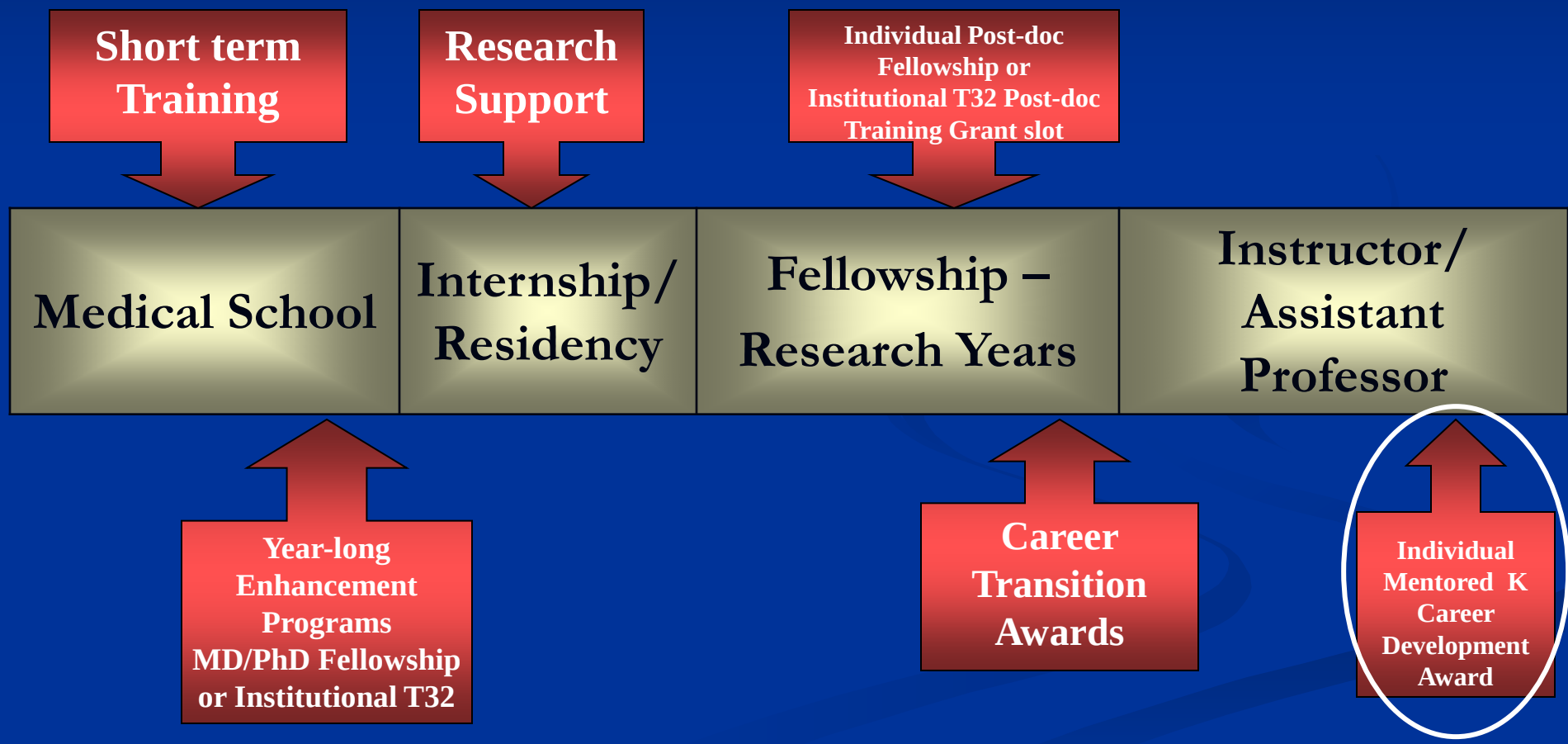
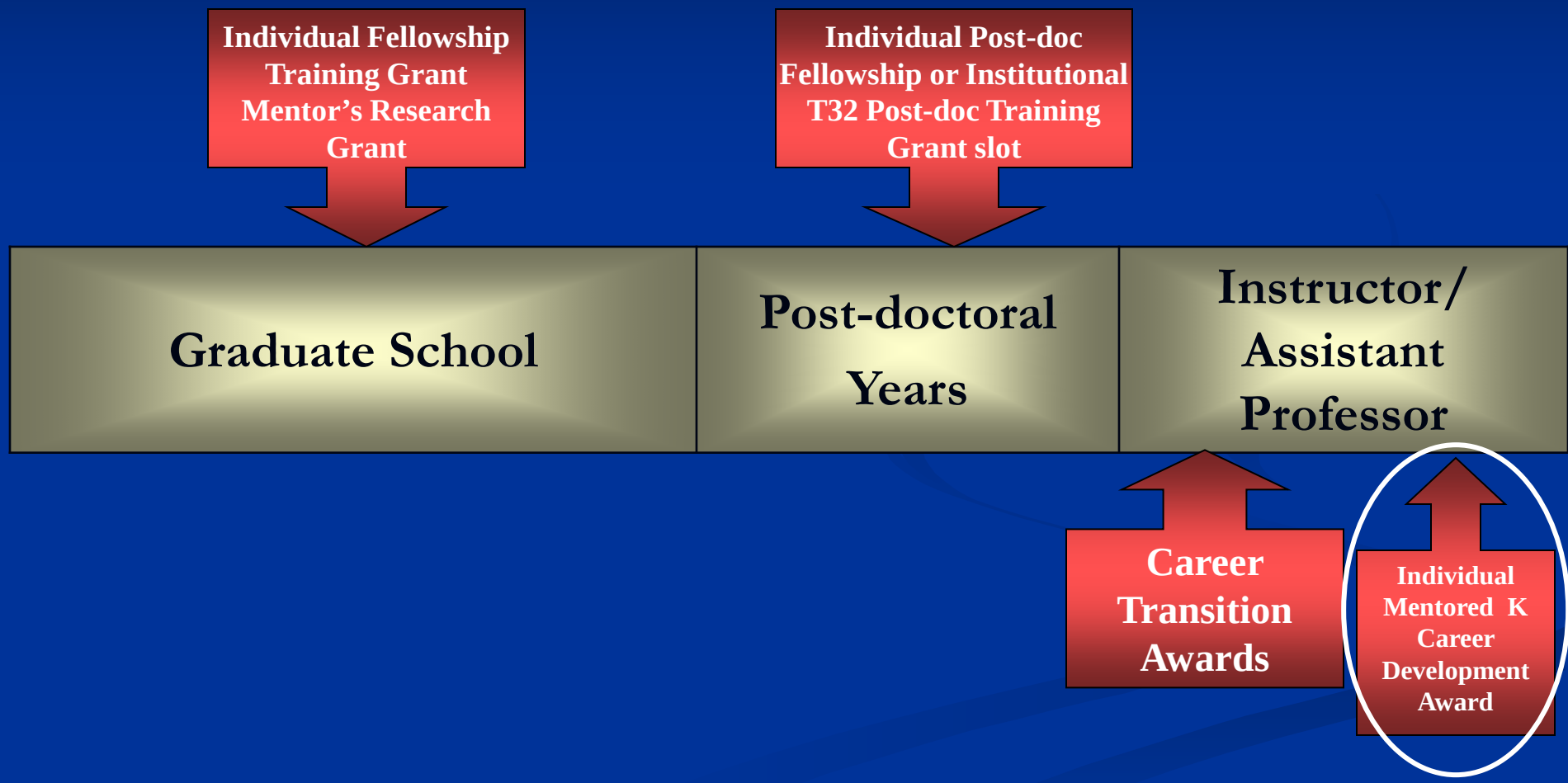
Timeline of NIH Funding for Junior Investigators



Timeline of NIH Funding for Junior Investigators



Career Development (K) Support to Independent Research Grant (R01)

K01/K08/K23 → R01

K12/KL2 K23 → R01

K12/KL2 K23 R01

K01/K08/K23 R01

K12/KL2 → R01

Not All Funding Opportunities Are the Same

- Different mission statements
  - Fellowships
  - **Career development (K's)/ Scholar awards**
  - Research project (R's)
- Different funding
  - Stipend/Salary
  - Pilot awards vs. Comprehensive research costs
- Different time frames
  - Not renewable: **5 years (K's),** 3 years (F's), 2 years (T's)
  - Renewable: 4years-5years (R01) each competitive period

Research Career Programs (K)

- Provides predominantly salary support
- Minimum requirements for the amount of effort that must be devoted to research and career development (e.g., 75%, some exceptions to 50%)
- Up to 5 years
- Specified salary levels
- US citizen/permanent resident.
- Can reduce effort to 50% in last 2 years if PI of NIH research grant

Mentored Clinical Scientist Development Award (K08)

- Support to develop outstanding independent clinician research scientists
- Basic and translational science

https://researchtraining.nih.gov/programs/career-development/K08

Mentored Patient-Oriented Research Career Development Award (K23)

"to support the career development of individuals with a clinical doctoral degree, who have the potential to develop into productive, clinical investigators, and who have made a commitment to focus their research endeavors on patient-oriented research."

https://researchtraining.nih.gov/programs/career-development/K23

Mid-Career Investigator In Patient-Oriented Research Career Development Award (K24)

"support to mid-career health-professional doctorates.. to devote to patient-oriented research and to act as research mentors primarily for clinical residents, clinical fellows and/or junior clinical faculty.

https://researchtraining.nih.gov/programs/career-development/K24

"For the purposes of the K23 award, **Patient-Oriented Research** is defined as research conducted with human subjects (or on material of human origin such as tissues, specimens and cognitive phenomena) for which an investigator (or colleague) directly interacts with human subjects.

This area of research **includes**: **1)** mechanisms of human disease; **2)** therapeutic interventions; **3)** clinical trials; and **4)** the development of new technologies.

Excluded from this definition are *in vitro* studies that utilize human tissues but do not deal directly with patients. In other words, patient-oriented research is research in which it is necessary to know the identity of the patients from whom the cells or tissues under study are derived. Studies falling under Exemption 4 for human subjects research are not included in this definition." https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

Notice of NCI's Withdrawal from Participation in PA-16-198 "Mentored Patient-Oriented Research Career Development Award (Parent K23)"

NCI will **no longer** be participating in PA-16-198, "Mentored Patient-Oriented Research Career Development Award (**Parent K23**)"

NCI will support training in Patient-Oriented Research through K08 Awards and increase K08 Salary and Research Support

NCI K08 Career Development Awards will support training in Basic, Translational, and Patient-Oriented Cancer Research, as well as combinations of Basic, Translational, and Patient-Oriented Research.

https://grants.nih.gov/grants/guide/notice-files/NOT-CA-17-043.html
https://grants.nih.gov/grants/guide/notice-files/NOT-CA-17-042.html

Mentored Research Scientist Development Award (K01)

Not all NIH Institutes participate in program

Participating Institutes may use for different purposes

- Specific research areas
- Increase research workforce diversity
- Train in a new field
- Hiatus in research career
- Some Institutes support the parent funding announcement, some issue their own

https://researchtraining.nih.gov/programs/career-development/K01
https://researchtraining.nih.gov/programs/career-development

K01

Mentored Research Scientist Career Development Award

For support of a postdoctoral or early career research scientists committed to research, in need of both advanced research training and additional experience.

Details

View Current Funding Opportunities

https://researchtraining.nih.gov/programs/career-development/K01
https://researchtraining.nih.gov/programs/career-development

Mentored Research Scientist Development Award (Parent K01 - Independent Clinical Trial Not Allowed)

PA-20-190

Special Note: Not all NIH Institutes and Centers participate in Parent Announcements. Applicants sho
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fun

Mentored Research Scientist Development Award (Parent K01 - Independent Clinical Trial Not Allowed) (PA-20-190)

PA-20-190

Table of IC-Specific Information, Requirements and Staff Contacts

Release Date: May 7, 2020
Expiration Date: **New Date** May 8, 2024

NIH Institute or Center Contacts	Institute or Center Specific Information

See Notices of Special Intere

PA-20-190 - Mentored Research Scientist Development Award (Parent K01 - Independent Clinical Trial Not Allowed) is used for the submission of applications to the following Notices of Special Interest (NOSIs)

Title	Notice Number	Organization	Release Date	Expiration Date	Activity Code(s)

Mentored Research Scientist Development Awards (K01)

- NIMH:
  - "supports a broad spectrum of basic and translational research, including basic neuroscience, human genetics, adult and developmental translational research, services and intervention research, and AIDS-related research"
- NIMHD:
  - "involving research to improve minority health and reduce health disparities, organized around three main Research Interest Areas: Clinical and Health Services Research, Community Health and Population Sciences, and Integrative Biological and Behavioral Sciences"

https://researchtraining.nih.gov/programs/career-development/K01

Mentored Research Scientist Development Awards (K01)

- NIDDK:
  - "to provide an intensive, supervised, research and career development experience for nonclinical, doctoral researchers as they transition to independent research careers"
- NIAID:
  - Epidemiology and Data Science
  - "includes but is not limited to computational modeling, bioinformatics, big data and advanced statistical analyses"

https://researchtraining.nih.gov/programs/career-development/K01

Mentored Research Scientist Development Awards (K01)

- NINR:
  - "must have a clear focus in science areas related to the NINR mission, which is to promote and improve the health of individuals, families, and communities. Applicants should also consider NINR areas of special interest…"
- NICHD:
  - (a) Medical Rehabilitation Research
  - (b) Child Abuse and Neglect
  - (c) Population Research
  - (d) Down Syndrome (temp.)

https://researchtraining.nih.gov/programs/career-development/K01

Mentored Research Scientist Development Awards (K01)

- NHLBI:
  - (a) Epidemiology
  - (b) Biostatistics
  - (c) Outcomes Research
  - (d) Implementation Research
  - (e) Data Science
- NIDA:
  - Implementation Sciences for Substance Abuse Prevention
- FIC: International Research Scientist Development
- NCI, NHLBI, NIDCR: To Promote Diversity

https://researchtraining.nih.gov/programs/career-development/K01

Mentored Quantitative Research Career Development Award (K25)

For investigators with expertise in quantitative science and engineering research (e.g., chemistry, computer science, economics, imaging science, informatics, mathematics, statistics, physics,), but whose research has not been primarily focused on NIH-relevant research areas of health and disease.

https://researchtraining.nih.gov/programs/career-development/K25

NIH National Institutes of Health
Research Training and Career Development

About DBRW | Career Path
DBRW Staff | The Biomedical Research Work

Research Career Development Awards

K01

Mentored Research Scientist Career Development Award

For support of a postdoctoral or early career research scientists committed to research, in need of both advanced research training and additional experience.

Details | View Current Funding Opportunities

K08

Mentored Clinical Scientist Research Career Development Award

To provide the opportunity for promising clinician scientists with demonstrated aptitude to develop into independent investigators, or for faculty members to pursue research, and aid in filling the academic faculty gap in health profession's institutions.

Details | View Current Funding Opportunities

K23

Mentored Patient-Oriented Research Career Development Award

To provide support for the career development of clinically trained professionals who have made a commitment to patient-oriented research, and who have the potential to develop into productive, clinical investigators.

Details | View Current Funding Opportunities

K99/ R00

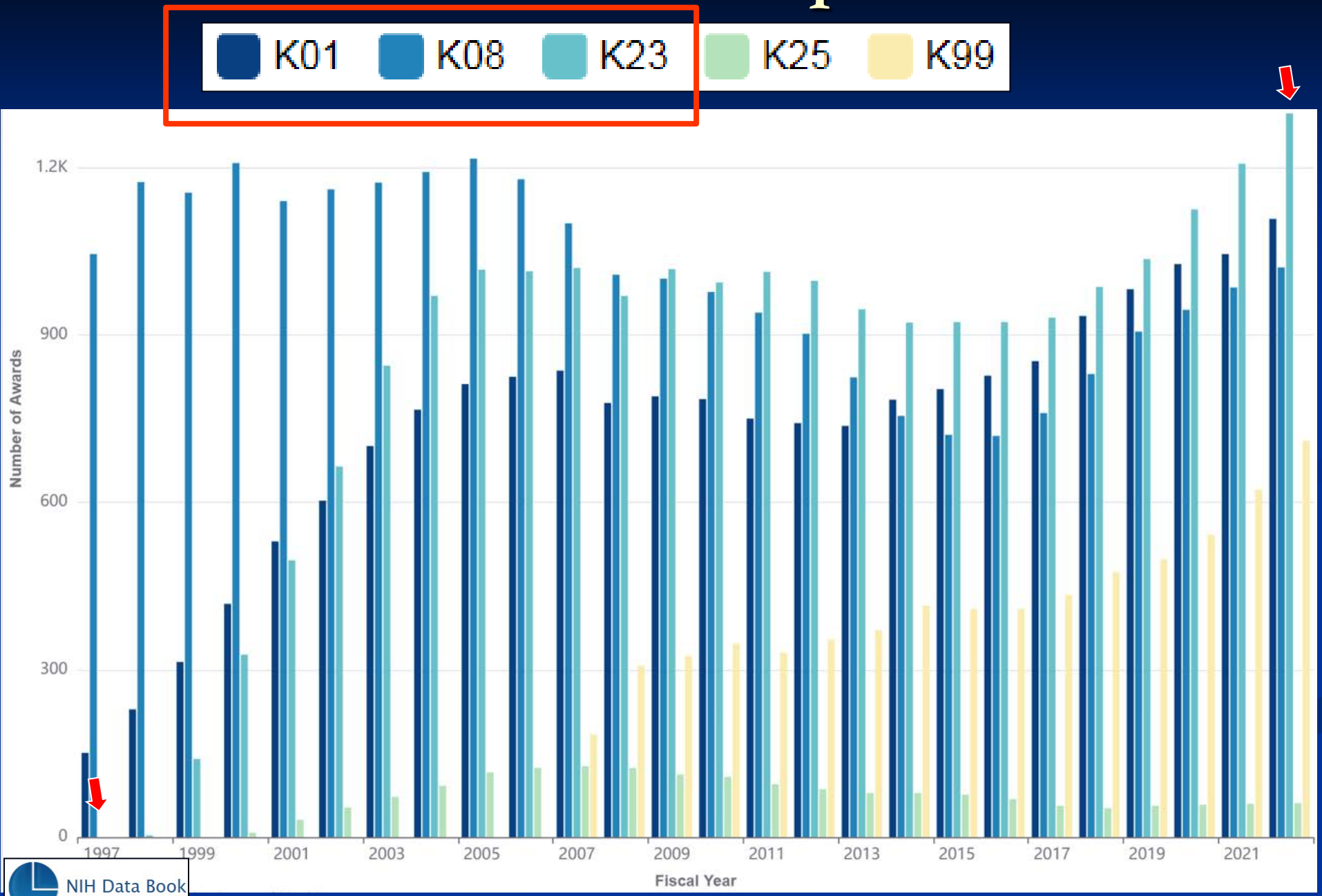
Pathway to Independence Award

To support both an initial mentored research experience (K99) followed by independent research (R00) for highly qualified, postdoctoral researchers, to secure an independent research position. Award recipients are expected to compete successfully for independent R01 support during the R00 phase.

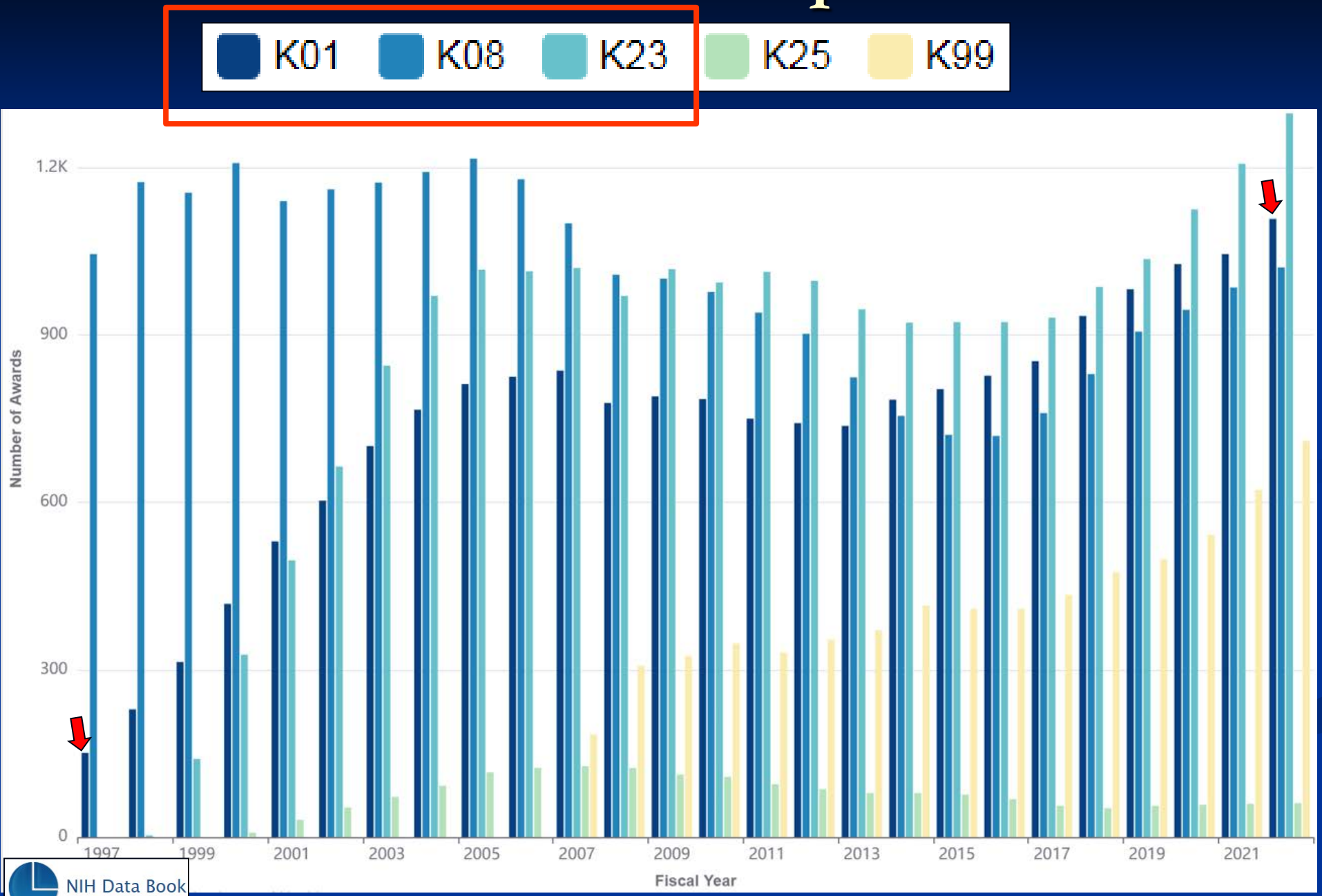
Details | View Current Funding Opportunities

https://researchtraining.nih.gov/programs/career-development

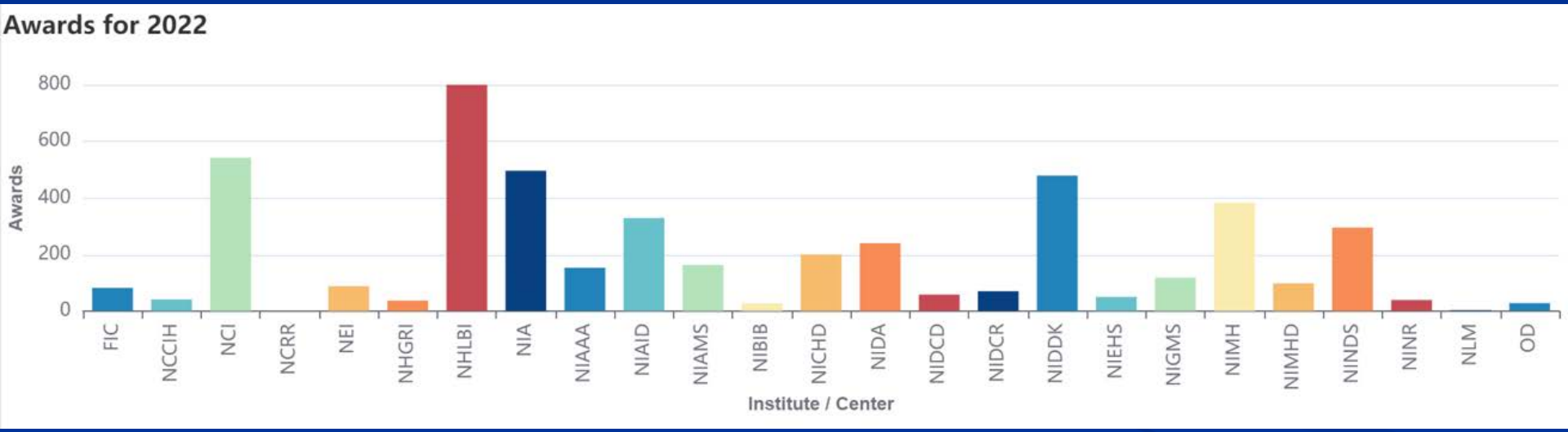
Research Career Development Awards



Research Career Development Awards

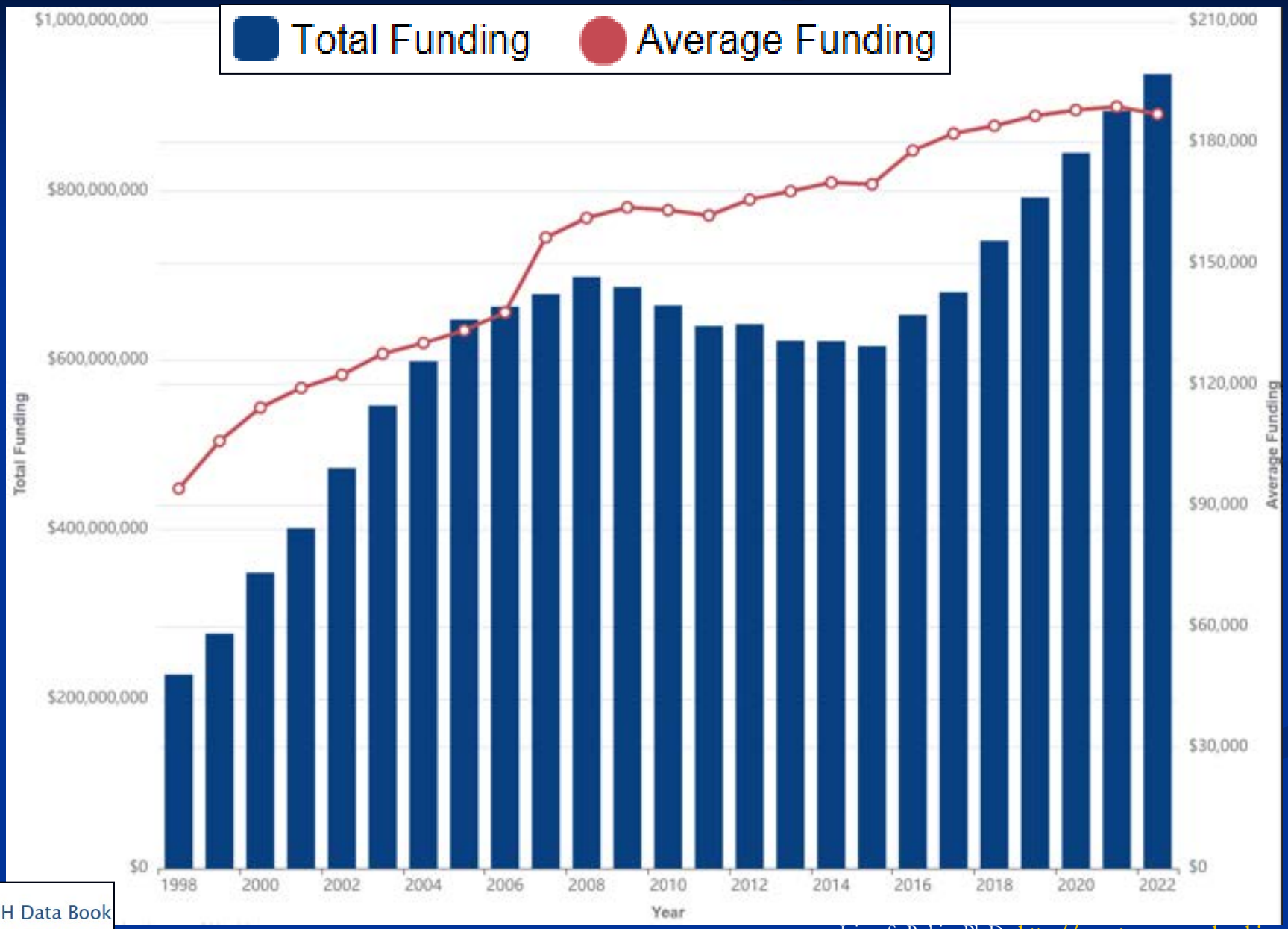


Individual Research Career Development Awards – by NIH Institute



NIH Data Book

Research Career Development Awards



NIH Data Book

Fiscal Year	Activity Code	NIH Institute / Center	Number of Applications Reviewed	Number of Applications Awarded	Success Rate[1]	Total Funding[2]
2022	K23	NHLBI	176	60	34.1%	$10,851,747
2022	K23	NIDCR	7	0	0.0%	$0
2022	K23	NIDDK	92	43	46.7%	$7,998,187
2022	K23	NINDS	72	24	33.3%	$4,534,972
2022	K23	NIAID	34	18	52.9%	$3,466,431
2022	K23	NIGMS	7	3	42.9%	$535,272
2022	K23	NICHD	79	25	31.6%	$3,940,186
2022	K23	NEI	19	9	47.4%	$2,030,523
2022	K23	NIEHS	3	0	0.0%	$0
2022	K23	NIA	52	17	32.7%	$2,941,567
2022	K23	NIAMS	31	12	38.7%	$1,922,906
2022	K23	NIDCD	13	5	38.5%	$830,205
2022	K23	NIMH	108	41	38.0%	$7,786,875
2022	K23	NIDA	49	17	34.7%	$3,226,212
2022	K23	NIAAA	10	4	40.0%	$716,451
2022	K23	NINR	22	9	40.9%	$1,365,873
2022	K23	NIBIB	2	1	50.0%	$165,601
2022	K23	NCCIH**	16	6	37.5%	$1,034,698
2022	K23	NIMHD***	19	15	78.9%	$2,377,783
2022	**K23**	**ACTIVITY TOTAL**	**811**	**309**	**38.1%**	**$55,725,489**

NIH Research Portfolio Online Reporting Tools (RePORT)

Success Rates

https://report.nih.gov/success_rates/index.aspx

NHLBI K23 Application Success Rate

Fiscal Year	Activity Code	NIH Institute / Center	Number of Applications Reviewed	Number of Applications Awarded	Success Rate[1]	Total Funding[2]
2013	K23	NHLBI	107	32	29.9%	$4,639,354
2014	K23	NHLBI	77	29	37.7%	$4,147,948
2015	K23	NHLBI	94	36	38.3%	$5,393,783
2016	K23	NHLBI	101	45	44.6%	$8,086,510
2017	K23	NHLBI	138	52	37.7%	$9,311,596
2018	K23	NHLBI	137	50	36.5%	$8,957,091
2019	K23	NHLBI	127	43	33.9%	$7,613,342
2020	K23	NHLBI	175	75	42.9%	$13,407,457
2021	K23	NHLBI	140	59	42.1%	$10,749,458
2022	K23	NHLBI	176	60	34.1%	$10,851,747

NIH Research Portfolio Online Reporting Tools (RePORT)

Success Rates

https://report.nih.gov/success_rates/index.aspx

Agency for Healthcare Research and Quality

- "mission is to produce evidence to make healthcare safer, higher quality, more accessible, equitable, and affordable"
- **K08:** Mentored Clinical Scientist Research Career Development Award/Patient-Centered Outcomes Research (PCOR) Mentored Clinical Scientist Career - for individuals with a clinical doctoral degree or Ph.D./other doctoral degree in a clinical discipline
- **K01:** Mentored Research Scientist Career Development Award - for individuals with a research doctoral degree

https://www.ahrq.gov/cpi/about/mission/index.html
https://www.ahrq.gov/funding/training-grants/k-awards.html

Centers for Disease Control and Prevention (CDC) K01

- National Institute for Occupational Safety and Health
  - Mentored Research Scientist Development Award
    - "career development experience in occupational health and safety research leading to research independence"

https://grants.nih.gov/grants/guide/pa-files/PAR-18-799.html

Parent Announcements (For Unsolicited or Investigator-Initiated Applications)

Career Development (K) Announcements

K08	Mentored Clinical Scientist Research Career Development Award (Parent K08 Independent Clinical Trial Not Allowed)	PA-20-203
K08	Mentored Clinical Scientist Research Career Development Award (Parent K08 Independent Clinical Trial Required)	PA-20-202
K08	Mentored Clinical Scientist Research Career Development Award (Parent K08 Independent Basic Experimental Studies with Humans Required)	PA-20-201
Expiration Date	**New Date** May 8, 2024 (Original Date: May 8, 2023) per issuance of NOT-OD-23-096	
K23	Mentored Patient-Oriented Research Career Development Award (Parent K23 Independent Clinical Trial Required)	PA-20-206
K23	Mentored Patient-Oriented Research Career Development Award (Parent K23 Independent Clinical Trial Not Allowed)	PA-20-205
K23	Mentored Patient-Oriented Research Career Development Award (Parent K23 Independent Basic Experimental Studies with Humans Required)	PA-20-204

Comparison of Funding Opportunity Announcement Types by Clinical Trial Allowability

Clinical Trial Not Allowed FOA	Clinical Trial Required FOA	Basic Experimental Studies with Humans Required FOA
• Studies not involving humans as research participants • Studies of biospecimens obtained from humans in which any experimental manipulation is performed on the biospecimens, not on the humans • Human observational studies in which no experimental manipulations of independent variables and no prospective assignment of interventions are performed • Studies in which experimental	• Studies of the safety, efficacy, or effectiveness of an intervention on biomedical or behavioral outcomes or processes • Studies that prospectively assign interventions intended or anticipated to change the health status of human participants even if not for the purpose of assessing the safety, efficacy or effectiveness of the intervention (e.g., to study the mechanisms or pathways by which the treatment produces its effect)	• Studies that prospectively assign interventions or experimentally manipulate independent variables with human participants and assess biomedical or behavioral outcomes for the purpose of understanding the fundamental aspects of phenomena without specific application towards processes or products in mind • Studies that use an experimental manipulation or intervention probe in order to understand normal functioning or the pathophysiology of a disorder
someone other than the investigator (e.g., health service delivery studies in which the assignment is performed by the healthcare system, natural experiments in which a natural or policy event occurs outside the investigator's control) • Studies of tests (e.g., laboratory, biomarkers, patient-report, performance, observational) in which the purpose of the study is to assess the various properties of the test (reliability, validity, sensitivity/specificity, etc.), not to assess biomedical or behavioral outcomes or processes	interventions or experimentally manipulate independent variables to understand the fundamental aspects of phenomena with a specific application in mind (e.g., FDA Phase 0 or 1 trials, translational/applied studies in which fundamental processes are applied to a particular problem or health condition)	*Note: Many ICs will continue to accept basic experimental studies with humans through existing FOAs that accept clinical trials (Clinical Trial Required or Clinical Trial Optional)*

https://grants.nih.gov/grants/Comparison-of-FOA-Types-Clinical-Trials.pdf

Note: Participation in Funding Opportunities will vary by NIH Institutes and Centers (ICs)

Research Career Development/ Scholar Programs

Non-government, non-profit agencies

- Voluntary Health Organizations
- Professional Societies
- Private Foundations

Research Career Development/ Scholar Programs

- American Heart Association
  - Career Development Award
- Harold Amos Medical Faculty Development Program
  - "…to increase the number of faculty from historically marginalized backgrounds who can achieve senior rank in academic medicine, dentistry, or nursing… " ["challenges facing individuals because of their race, ethnicity, socioeconomic status, or other similar factors"]
  - Partners: American Association for the Study of Liver Diseases, American Heart Association, American Society of Hematology, American Society of Nephrology, American Thoracic Society/American Lung Association/American College of Chest Physicians
- Conquer Cancer Foundation (ASCO)
  - Career Development Award

Topics to be Discussed

- Individual Fellowship Programs
  - Overview of Programs and Funding Agencies
  - NIH Review Process, Criteria, and Scoring System
  - Components of an NIH Application
- Career Transition Funding Programs
- **Junior Faculty Career Development Programs**
  - Overview of Programs and Funding Agencies
  - **NIH Review Process, Criteria, and Scoring System**
  - Components of an NIH Application

NEW APPLICATIONS

Application Due Dates

Activity Codes	Program Description	Cycle I Due Date	Cycle II Due Date	Cycle III Due Date
K series *new*	**Research Career Development**	February 12	June 12	October 12

https://grants.nih.gov/grants/how-to-apply-application-guide/due-dates-and-submission-policies/due-dates.htm

RESUBMISSION AND COMPETITIVE RENEWAL (K24) APPLICATIONS

Application Due Dates

Activity Codes	Program Description	Cycle I Due Date	Cycle II Due Date	Cycle III Due Date
K series *renewal, resubmission, revision*	**Research Career Development**	March 12	July 12	November 12

https://grants.nih.gov/grants/how-to-apply-application-guide/due-dates-and-submission-policies/due-dates.htm

Application Due Dates

All Activity Codes Cited Above *new, renewal, resubmission, revision*	**AIDS and AIDS-Related Applications** *Effective. Sept 5, 2015 - N/A for SBIR/STTR Applications using Standard Due Dates NOTE: See Key Dates section of funding opportunity announcement to determine if AIDS dates apply.	May 7	September 7	January 7

https://grants.nih.gov/grants/how-to-apply-application-guide/due-dates-and-submission-policies/due-dates.htm

Application Due Dates

Review and Award Cycles

	Cycle I	Cycle II	Cycle III
Application Due Dates	January 25 - May 7	May 25 - Septem	September 25 - January 7
Scientific Merit Review	June - July	October - Novem	February - March
Advisory Council Round	August or October *	January	May
Earliest Project Start Date	September or December *	April	July

https://grants.nih.gov/grants/how-to-apply-application-guide/due-dates-and-submission-policies/due-dates.htm

NIH's Evaluation System

9-point rating scale (1=exceptional; 9=poor)

Impact	Score	Descriptor	Strengths/Weaknesses
High Impact	1	Exceptional	Strengths
	2	Outstanding	
	3	Excellent	
Moderate Impact	4	Very Good	
	5	Good	
	6	Satisfactory	
Low Impact	7	Fair	
	8	Marginal	
	9	Poor	Weaknesses

http://enhancing-peer-review.nih.gov/docs/scoring_and_critique_overview_June2009.pdf

Impact	Score	Descriptor	Additional Guidance on Strengths/Weaknesses
High	1	Exceptional	Exceptionally strong with essentially no weaknesses
	2	Outstanding	Extremely strong with negligible weaknesses
	3	Excellent	Very strong with only some minor weaknesses
Medium	4	Very Good	Strong but with numerous minor weaknesses
	5	Good	Strong but with at least one moderate weakness
	6	Satisfactory	Some strengths but also some moderate weaknesses
Low	7	Fair	Some strengths but with at least one major weakness
	8	Marginal	A few strengths and a few major weaknesses
	9	Poor	Very few strengths and numerous major weaknesses

Minor Weakness: An easily addressable weakness that does not substantially lessen impact

Moderate Weakness: A weakness that lessens impact

Major Weakness: A weakness that severely limits impact

http://grants.nih.gov/grants/peer/guidelines_general/scoring_system_and_procedure.pdf

FELLOWSHIPS & CAREER AWARDS

Overall Impact:
The likelihood that the proposed training (F) or career development (K) will enhance the candidate's potential for a productive, independent scientific research career in a health-related field.

Overall Impact	High	Medium	Low
Score	1 2 3	4 5 6	7 8 9

Evaluating Overall Impact
Consider the 5 criteria
(weighting based on reviewer's judgment):

Fs
- Applicant
- Sponsor(s)
- Research Training Plan
- Training Potential
- Institutional Environment & Commitment

Ks
- Candidate
- Career Development Plan/Goals*
- Research Plan
- Mentor(s)**
- Environment & Institutional Commitment

and other score influences, e.g. human subjects, animal welfare, inclusion plans, and biohazards

*K05 and K24: Plan to Provide Mentoring
**K02: Consultants/Collaborators

e.g. Proposes training or career development of high value/benefit for the candidate who has high potential for developing into a productive, independent scientist. May have some or no weaknesses in the criteria.

e.g. Proposes training or career development of high or moderate value/benefit for the candidate who has high or moderate potential for further development, but weaknesses in the criteria reduce the overall impact to medium.

e.g. Proposes training or career development of moderate value/benefit for the candidate who shows moderate potential. May have some weaknesses in the criteria.

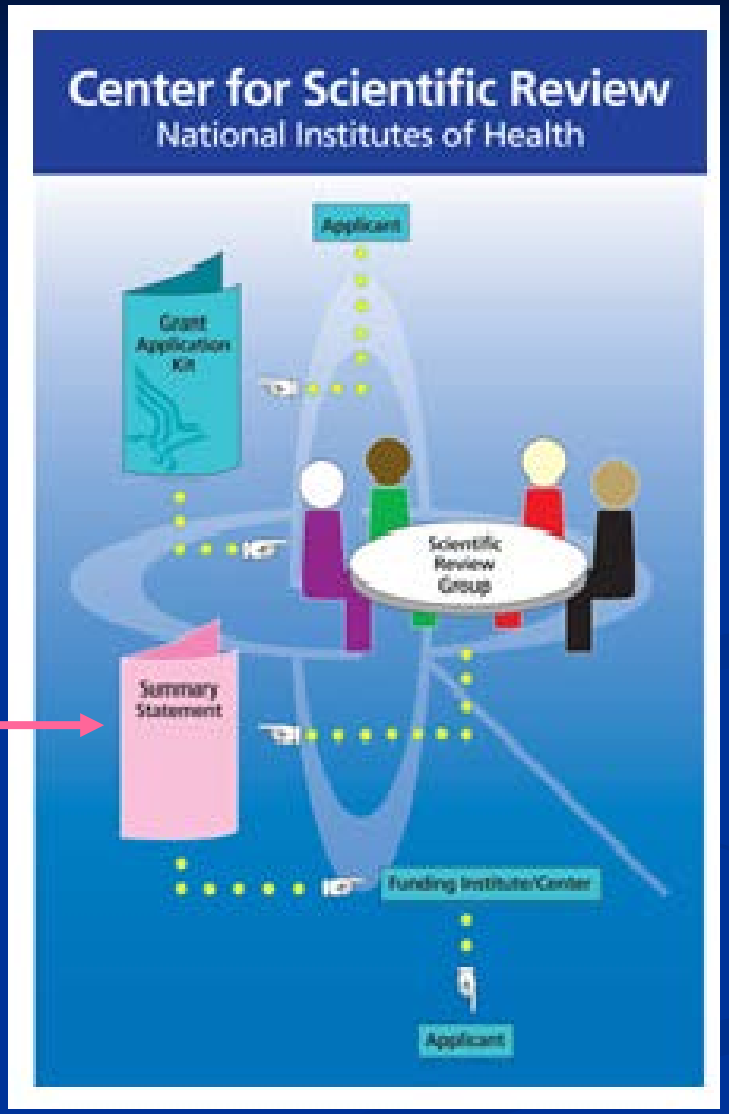
e.g. Proposes training or career development of moderate or low value/benefit for the candidate who has moderate or low potential for further development. Weaknesses in the criteria reduce the overall impact to low.

e.g. Proposes training or career development of low value/benefit for the candidate who shows low potential. May have some weaknesses in the criteria.

5 is a good, medium-impact application. The entire scale (1-9) should always be considered.

https://grants.nih.gov/grants/peer/guidelines_general/scoring_guidance_training.pdf

Pink Sheet: Reviewers' Comments



Initial Review Group or Study Section Actions

- **Discussed applications:**
  - Receives Impact/Priority Scores
  - Receives Scores for individual core review criteria
- **Not Discussed:**
  - Receives Scores for individual core review criteria
- Not Recommended for Further Consideration (NRFC)
- Other: e.g., Deferred

Impact Score

- Preliminary Impact Scores determine which applications discussed at study section
- Impact Score given by each member of the study section
- Overall Impact Score (for discussed applications): Mean of reviewers' Impact Scores x10
- 81 possible overall Impact Scores

  (10 – 90, whole numbers)

K awards Payline: NHLBI

Payline

Grant Program	Grant Program Description	Percentile	Priority Score
R01	Research Project Grant	14	N/A
R01 ESI	Early Stage Investigators	24	N/A
K awards	Career Development Awards	N/A	30

FY23

https://www.nhlbi.nih.gov/current-operating-guidelines

NIH's Review Criteria

- **Overall Impact Score**
  - "assessment of the likelihood that the proposed career development and research plan will enhance the candidate's potential for a productive, independent scientific research career in a health-related field…"
- **Core Review Criteria**

  A separate score is given for each

For Mentored Patient-Oriented Research Career Development Award (Parent K23 – Independent Clinical Trial Not Allowed) (PA-20-205)
Check individual funding announcement if applying to another

https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

Overall Impact *Write a paragraph summarizing the factors that informed your Overall Impact score.*

Separate Scores for the Individual Criteria

- All applications receive scores
  (even those not discussed at study section)
- Individually reported in summary statement
- Major strengths and weaknesses that influenced the overall impact/priority score - ¼ page per criterion

http://enhancing-peer-review.nih.gov/docs/ReviewerVideoslides030609_Modified.ppt

1. Candidate
Strengths • **Weaknesses** •

2. Career Development Plan/Career Goals & Objectives/Plan to Provide Mentoring
Strengths • **Weaknesses** •

3. Research Plan
Strengths • **Weaknesses** •

4. Mentor(s), Co-Mentor(s), Consultant(s), Collaborator(s)
Strengths • **Weaknesses** •

5. Environment and Institutional Commitment to the Candidate
Strengths • **Weaknesses** •

1. Candidate

- "Does the candidate have the potential to develop as an independent and productive researcher?
- Are the candidate's prior training and research experience appropriate for this award?
- Is the candidate's academic, clinical (if relevant), and research record of high quality?
- Is there evidence of the candidate's commitment to meeting the program objectives to become an independent investigator in research?"

https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

1. Candidate

- "Do the reference letters address the above review criteria, and do they provide evidence that the candidate has a high potential for becoming an independent investigator?"

https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

2. Career Development Plan/Career Goals & Objectives

- "What is the likelihood that the plan will contribute substantially to the scientific development of the candidate and lead to scientific independence?
- Are the candidate's prior training and research experience appropriate for this award?
- Are the content, scope, phasing, and duration of the career development plan appropriate when considered in the context of prior training/research experience and the stated training and research objectives for achieving research independence?"

https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

2. Career Development Plan/Career Goals & Objectives

- "Are there adequate plans for monitoring and evaluating the candidate's research and career development progress?"
- If proposed, will the clinical trial experience contribute to the applicant's research career development?

https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

3. Research Plan

- "Are the proposed research questions, design, and methodology of significant scientific and technical merit?
- Is the prior research that serves as the key support for the proposed project rigorous?
- Has the candidate included plans to address weaknesses in the rigor of prior research that serves as the key support for the proposed project?
- Has the candidate presented strategies to ensure a robust and unbiased approach, as appropriate for the work proposed?

https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

3. Research Plan

- Has the candidate presented adequate plans to address relevant biological variables, such as sex, for studies in vertebrate animals or human subjects?"
- "Is the research plan relevant to the candidate's research career objectives?
- Is the research plan appropriate to the candidate's stage of research development and as a vehicle for developing the research skills described in the career development plan?"
- If proposed, will the clinical trial experience contribute to the proposed research project?

https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

NIH Review criteria – changes

- For applications with deadlines on or after January 25, 2019

Section	Criteria	Current language	Revised language
Scored Review Criteria	Research Plan	Is there a strong scientific premise for the project?	Is the prior research that serves as the key support for the proposed project rigorous?
Scored Review Criteria	Research Plan	Not Applicable	Has the candidate included plans to address weaknesses in the rigor of prior research that serves as the key support for the proposed project?

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-229.html

4. Mentor(s), Co-mentor(s), Consultant(s), Collaborator(s)

- "Are the qualifications of the mentor(s) in the area of the proposed research appropriate?
- Do(es) the mentor(s) adequately address the candidate's potential and his/her strengths and areas needing improvement?
- Is there adequate description of the quality and extent of the mentor's proposed role in providing guidance and advice to the candidate?
- Is the mentor's description of the elements of the research career development activities, including formal course work adequate?"

https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

4. Mentor(s), Co-mentor(s), Consultant(s), Collaborator(s)

- "Is there evidence of the mentor's, consultant's and/or collaborator's previous experience in fostering the development of independent investigators?
- Is there evidence of the mentor's current research productivity and peer-reviewed support?
- Is active/pending support for the proposed research project appropriate and adequate?
- Are there adequate plans for monitoring and evaluating the career development awardee's progress toward independence?"

https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

4. Mentor(s), Co-mentor(s), Consultant(s), Collaborator(s)

- "If the applicant is proposing to gain experience in a clinical trial as part of his or her research career development, is there evidence of the appropriate expertise, experience, and ability on the part of the mentor(s) to guide the applicant during participation in the clinical trial?"

https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

5. Environment and Institutional Commitment to the Candidate

- "Is there clear commitment of the sponsoring institution to ensure that the required minimum of the candidate's effort [usually 75%] will be devoted directly to the research described in the application, with the remaining percent effort being devoted to an appropriate balance of research, teaching, administrative, and clinical responsibilities?
- Is the institutional commitment to the career development of the candidate appropriately strong?"

https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

5. Environment and Institutional Commitment to the Candidate

- "Are the research facilities, resources and training opportunities, including faculty capable of productive collaboration with the candidate, adequate and appropriate?
- Is the environment for scientific and professional development of the candidate of high quality?
- Is there assurance that the institution intends the candidate to be an integral part of its research program as an independent investigator?"

https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

Additional Review Criteria

Evaluated for the overall impact score, but not given an individual score

- Protections for Human Subjects
- Inclusion of Women, Minorities, and Individuals Across the Lifespan
- Vertebrate Animals
- Biohazards
- Resubmissions
  - Response to previous reviewers' comments and subsequent changes made to the proposal

https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

Additional Review Considerations

Not given an individual score and not considered for the overall impact score

- Training in the Responsible Conduct of Research
  - Address required components (training faculty involvement)
- Select Agent Research
- Resource Sharing Plans
  - 1) Data Sharing Plan; 2) Sharing Model Organisms; and 3) Genomic Data Sharing Plan
- Authentication of Key Biological and/or Chemical Resources
  - Plans for identifying and ensuring the validity of resources
- Budget and Period of Support

https://grants.nih.gov/grants/guide/pa-files/PA-20-205.html

Guidance for NIH Reviewers

https://grants.nih.gov/grants/policy/review/rev_prep/applications.htm

- Rigor and Transparency
- Sex as a Biological Variable
- Vertebrate Animals
- Human Subjects Section
- Clinical Trials
- Single IRB for multi-site studies
- Inclusion on the Basis of Sex/Gender, Race, Ethnicity, and Age in Clinical Research
- Human Embryonic Stem Cells
- Authentication of Key Biological and/or Chemical Resources
- Select Agents
- Resource Sharing Plans
- Budget Information
- Revision Applications

Guidelines for NIH Reviewers

https://grants.nih.gov/grants/policy/review-guidelines.htm

R	R and U Awards (Research Project Grants; R01, R03, R21, SBIR/STTR, etc. and Cooperative Agreements: U01, etc.).	+
K	K Awards (Career Development)	+
F	F Awards (Fellowships)	+
S	S10 Awards (Shared Instrumentation)	+
T	T Awards (Training)	+

Guidelines for NIH Reviewers

https://grants.nih.gov/grants/policy/review-guidelines.htm

K | K Awards (Career Development) –

- K01 GUIDE FOR REVIEWERS (11/22/2021)
- K02 GUIDE FOR REVIEWERS (07/28/2020)
- K07 GUIDE FOR REVIEWERS (07/28/2020)
- K08 GUIDE FOR REVIEWERS (11/22/2021)
- K12 Institutional Clinician Scientist Award (see below under T awards) (07/28/2020)
- K22 GUIDE FOR REVIEWERS (11/22/2021)
- K23 GUIDE FOR REVIEWERS (11/22/2021)
- K24 GUIDE FOR REVIEWERS (07/28/2021)
- K25 GUIDE FOR REVIEWERS (11/22/2021)
- K99/R00 GUIDE FOR REVIEWERS (11/22/2020)

NIH Review criteria – changes

- For applications with deadlines on or after January 25, 2019

Additional Review Criteria	Inclusion of Women, Minorities, and Individuals Across the Lifespan	When the proposed project involves human subjects and/or NIH-defined clinical research, the committee will evaluate the proposed plans for the inclusion (or exclusion) of individuals on the basis of sex/gender, race, and ethnicity, as well as the inclusion (or exclusion) of children to determine if it is justified in terms of the scientific goals and research strategy proposed.	When the proposed project involves human subjects and/or NIH-defined clinical research, the committee will evaluate the proposed plans for the inclusion (or exclusion) of individuals on the basis of sex/gender, race, and ethnicity, as well as the inclusion (or exclusion) of individuals of all ages (including children and older adults) to determine if it is justified in terms of the scientific goals and research strategy proposed.

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-116.html
https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-229.html

Clinical Trial-Specific Review Criteria

FOAs that accept clinical trials will include additional review criteria questions in *Section V. Application Review Information.*

Revision: The NIH Announces Additional Review Criteria for Career Development Award Applications Involving Clinical Trials

Notice Number: NOT-OD-18-109

In *addition* to the standard individual K award review questions:

Scored Review Criteria (Independent Clinical Trial Required)

Candidate
Research Plan
Mentor(s), Co-Mentor(s), Consultant(s), Collaborator(s)
Environment & Institutional Commitment to the Candidate

Scored Review Criteria (Independent Clinical Trial Not Allowed)

Career Development Plan/Career Goals and Objectives
Research Plan
Mentor(s), Co-Mentor(s), Consultant(s), Collaborator(s)

Additional Review Criteria

Study Timeline for Clinical Trials

https://grants.nih.gov/policy/clinical-trials/review-criteria.htm
https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-109.html
https://grants.nih.gov/grants/peer/critiques/k_D.htm

Guidance: Rigor and Reproducibility in Grant Applications

NIH research grant and career development award application instructions and review language focus on four key areas:

1. The rigor of the prior research
2. Rigorous experimental design for robust and unbiased results
3. Consideration of relevant biological variables
4. Authentication of key biological and/or chemical resources

https://grants.nih.gov/policy/reproducibility/guidance.htm

Guidance: Rigor and Reproducibility in Grant Applications

- "**Individual career development applications** In describing their career development plans in the Program Plan attachment, candidates for career development awards will be expected to address, as applicable, any new research skills they plan to acquire in the areas of rigorous research design, experimental methods, quantitative approaches, and data analysis and interpretation."

Reviewer Guidance on Rigor and Transparency: Research Project Grant and Mentored Career Development Applications

OVERVIEW: MENTORED CAREER DEVELOPMENT AWARD (K) APPLICATIONS

Element of Rigor and Transparency	Section of Application	Criterion Score	Additional Review Consideration	Contribute to Overall Impact Score?
Rigor of the Prior Research	Research Strategy	Research Plan	NA	Yes
Scientific Rigor	Research Strategy	Research Plan	NA	Yes
Consideration of Relevant Biological Variables, such as Sex	Research Strategy	Research Plan	NA	Yes
Authentication of Key Biological and/or Chemical Resources	New Attachment	NA	Yes	No

Rigor and Reproducibility in NIH Applications: Resource Chart

4 AREAS OF FOCUS	WHAT DOES IT MEAN?	WHERE SHOULD IT BE INCLUDED IN THE APPLICATION?
Rigor of the Prior Research	A careful assessment of the **rigor of the prior research** that serves as the key support for a proposed project will help applicants identify any weaknesses or gaps in the line of research. Describe the strengths and weaknesses in the rigor of the prior research (both published and unpublished) that serves as the key support for the proposed project. Describe plans to address weaknesses in the rigor of the prior research that serves as the key support for the proposed project. *See related FAQs, blog post	Research Strategy ➢ Significance ➢ Approach
Scientific Rigor (Design)	**Scientific rigor** is the strict application of the scientific method to ensure robust and unbiased experimental design, methodology, analysis, interpretation and reporting of results. Emphasize how the experimental design and methods proposed will achieve robust and unbiased results. *See related FAQs, blog post, examples from pilots	Research Strategy ➢ Approach

https://grants.nih.gov/grants/Rigor-and-Reproducibility-Chart-508.pdf

Rigor and Reproducibility in NIH Applications: Resource Chart

4 AREAS OF FOCUS	WHAT DOES IT MEAN?	WHERE SHOULD IT BE INCLUDED IN THE APPLICATION?
Biological Variables	**Biological variables**, such as sex, age, weight, and underlying health conditions, are often critical factors affecting health or disease. In particular, sex is a biological variable that is frequently ignored in animal study designs and analyses, leading to an incomplete understanding of potential sex-based differences in basic biological function, disease processes and treatment response. Explain how relevant biological variables, such as the ones noted above, are factored into research designs, analyses, and reporting in vertebrate animal and human studies. Strong justification from the scientific literature, preliminary data or other relevant considerations must be provided for applications proposing to study only one sex. *See related FAQs, blog posts, article	**Research Strategy** ➢ Approach
Authentication	**Key biological and/or chemical resources** include, but are not limited to, cell lines, specialty chemicals, antibodies and other biologics. Briefly describe methods to ensure the identity and validity of key biological and/or chemical resources used in the proposed studies. These resources may or may not have been generated with NIH funds and: • may differ from laboratory to laboratory or over time; • may have qualities and/or qualifications that could influence the research data; • are integral to the proposed research. The authentication plan should state in one page or less how you will authenticate key resources, including the frequency, as needed for your research. Note: Do not include authentication data in your plan. *See related FAQs, blog post, examples	**Other Research Plan Section** ➢ Include as an attachment ➢ Do not include in the Research Strategy.

Topics to be Discussed

- Individual Fellowship Programs
  - Overview of Programs and Funding Agencies
  - NIH Review Process, Criteria, and Scoring System
  - Components of an NIH Application
- Career Transition Funding Programs
- **Junior Faculty Career Development Programs**
  - Overview of Programs and Funding Agencies
  - NIH Review Process, Criteria, and Scoring System
  - **Components of an NIH Application**

New NIH "FORMS-H" Grant Application Forms and Instructions Coming for Due Dates on or after January 25, 2023

The following application forms include substantive form changes (i.e., new/deleted/modified fields). All other forms include only an OMB expiration date change.

- PHS 398 Research Plan Form
- PHS 398 Career Development Award Supplemental Form
- PHS 398 Research Training Program Plan
- PHS Fellowship Supplemental Form

Key Changes:

- For NIH, as part of the implementation of the 2023 NIH Data Management and Sharing Policy, a new "Other Plan(s)" attachment field has been added to the PHS 398 Research Plan Form and the PHS 398 Career Development Award Supplemental Form. Applicants must attach the required Data Management and Sharing Plan in this new field in FORMS-H applications. See NOT-OD-21-013 and NOT-OD-22-189 for more information. Note: Although the 2023 NIH Data Management and Sharing Policy is not applicable to fellowship and institutional training grant applications, the new attachment field was added for potential future use with other plans

NIH and AHRQ Announce Upcoming Changes to Policies, Instructions and Forms for Research Training Grant, Fellowship, and Career Development Award Applications

Notice Number: NOT-OD-20-033

- In describing their career development plans in the Program Plan attachment, candidates for career development awards will be expected to address, as applicable, any new research skills they plan to acquire in the areas of rigorous research design, experimental methods, quantitative approaches, and data analysis and interpretation.
- Applicants for diversity-related career development programs will be expected to attach a Description of Candidate's Contribution to Program Goals, explaining how the candidate's participation would further the goals of the program to promote diversity in health-related research.

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-20-033.html

FORMS VERSION H SERIES

Released: August 5th, 2023

CAREER DEVELOPMENT INSTRUCTIONS FOR NIH AND OTHER PHS AGENCIES

SF424 (R&R) APPLICATION PACKAGES

GENERAL APPLICATION GUIDE FOR NIH AND OTHER PHS AGENCIES

SF424 (R&R) - Forms Version H

Released: October 25, 2022

Last Revised: October 25, 2022

G.410 - PHS 398 Career Development Award Supplemental Form

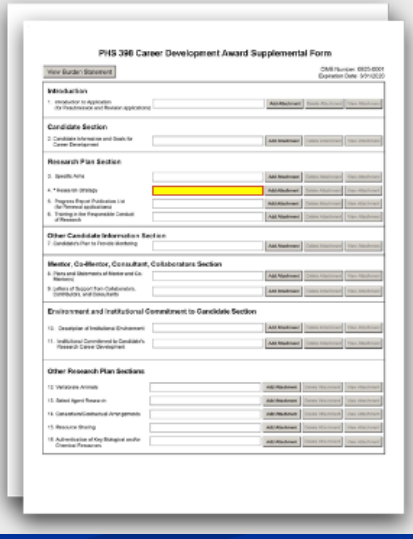
The PHS 398 Career Development Award Supplemental Form is used only for career development applications and multi-project applications with an "Indiv. Career Dev" Component.

This form includes fields to upload several attachments including the Specific Aims, Research Strategy, and Candidate Background and Goals.

See NIH's Reference Letters page for information including instructions for referees and how to submit letters.

The attachments in this form, together with the rest of your application, should include sufficient information needed for evaluation of the project and the candidate, independent of any other documents (e.g., previous application). Be specific and informative, and avoid redundancies.

View larger image



Quick Links

Introduction

1. Introduction to Application (for Resubmission and Revision applications)

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.410-phs-398-career-development-award-supplemental-form.htm

For Individual Career Development Award (K, excluding K12) Applications

Section of Application	Page Limits * (if different from FOA, FOA supersedes)
Project Summary/Abstract	30 lines of text
Project Narrative	Three sentences
Introduction to Resubmission or Revision Application (when applicable)	1
Candidate Information and Goals for Career Development and Research Strategy	12 (for both attachments combined)
Specific Aims	1
Training in the Responsible Conduct of Research	1
Candidate's Plan to Provide Mentoring (Include only when required by the specific FOA, e.g., K24 and K05)	6
Plans and Statements of Mentor and Co-mentor(s)	6
Letters of Support from Collaborators, Contributors, and Consultants	6
Description of Institutional Environment	1
Institutional Commitment to Candidate's Research Career Development	1
Biographical Sketch	5

https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/page-limits.htm#car

PHS 398 Career Development Award Supplemental Form

View Burden Statement

OMB Number: 0925-0001
Expiration Date: 09/30/2024

Introduction

1. Introduction to Application (for Resubmission and Revision applications) — Add Attachment | Delete Attachment | View Attachment

Candidate Section

2. Candidate Information and Goals for Career Development — 12 pages total — Add Attachment | Delete Attachment | View Attachment

Research Plan Section

3. Specific Aims — 1 page — Add Attachment | Delete Attachment | View Attachment
4. * Research Strategy — 12 pages total — Add Attachment | Delete Attachment | View Attachment
5. Progress Report Publication List (for Renewal applications) — Add Attachment | Delete Attachment | View Attachment
6. Training in the Responsible Conduct of Research — 1 page — Add Attachment | Delete Attachment | View Attachment

Other Candidate Information Section

7. Candidate's Plan to Provide Mentoring — Add Attachment | Delete Attachment | View Attachment

Mentor, Co-Mentor, Consultant, Collaborators Section

8. Plans and Statements of Mentor and Co-Mentor(s) — 6 pages — Add Attachment | Delete Attachment | View Attachment
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Environment and Institutional Commitment to Candidate Section

10. Description of Institutional Environment — 1 page — Add Attachment | Delete Attachment | View Attachment
11. Institutional Commitment to Candidate's Research Career Development — 1 page — Add Attachment | Delete Attachment | View Attachment
12. Description of Candidate's Contribution to Program Goals — Add Attachment | Delete Attachment | View Attachment

1 + 12 Pages Combined

- **Candidate Information**
  - Section 2
- **Research Plan**
  - 3. Specific Aims (1 page)
  - 4. Research Strategy

12 Pages Combined

- **Candidate Information**
  - Section 2
- **Research Plan**
  - 4. Research Strategy

Candidate Information and Goals for Career Development and Research Strategy	12 (for both attachments combined)

•"Some page limits apply to multiple attachments that when combined must stay within a designated limit. You may want to prepare your information in a single document to ensure you are within the page limit and later break-up the information into the various separate attachments. Our systems will accommodate a certain amount of white space resulting from splitting the information into the separate attachments when verifying compliance with a limit."

https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/page-limits.htm#car
https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/format-attachments.htm#pagelimits

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2. Candidate Information

- Candidate's Background
- Career Goals and Objectives
- Candidate's Plan for Career Development/ Training Activities During Award Period

2. Candidate's Background

- Scientific history/Unique expertise
  - Previous work
    - Consistent themes, or
    - Why research interests evolved/changed direction
  - Relationship to career path described in application
- Didactic/training experiences
  - e.g., Master's degree, workshops
- Other research experiences
  - e.g., Graduate/Medical school, MD/PhD, Fellowship
- Reasons for basic, clinical, translational, epidemiology, behavioral, multidisciplinary research, relevant publications – cite yourself!

Career Goals and Objectives

- Justify award
  - Fits into past and future research career
- Skills that are lacking
  - Identification of specific modules to address areas for growth, provides justification of award
  - Role of specific Mentor(s) and Advisory Committee member(s)

- **Mentors/Advisory Committee**
  - Scientific area per Mentor/Committee member
  - Schedule of meetings

Career Development and Research Training Mentors and Advisors		
Faculty Member	**Role**	**Area of Expertise**
Name (Title)	Mentor	
Name (Title)	Co-Mentor	
Name (Title)	Advisory Board Member	
Name (Title)	Advisory Board Member	
Name (Title)	Advisory Board Member	
Name (Title)	Collaborator	
Name (Title)	Consultant	

- Short-term Career Goals
  - Timeline for funded period

Year 1: Preliminary data

Year 2: Submit publications (possible journals), Presentations at national meetings (examples), Formulation of R01 application

Years 3-5: By the end of the funded period, applicant will be an independent investigator near to R01 funding

- Long-term Career Goals
  - Scientific goals
    - Basic science, translational, clinical, epidemiologic, behavioral
  - Mentoring goals
    - How mentoring has been important to you
    - Previous/current mentoring responsibilities
  - Networking goals
    - Multidisciplinary activities, grants, etc.
  - Leadership goals
    - e.g., Govt. policies, Professional societies
  - Enhancing the diversity of the biomedical workforce

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.410-phs-398-career-development-award-supplemental-form.htm

Career Development/Training Activities During Award Period

- Review of didactic courses, clinical training, and research experiences to date
- New research skills/ knowledge required
- Identification of training required to fill gaps in knowledge in order to reach long term goals
  - Rational for each of the training activities

- New Section on each Module
  - Reason for module
  - Specific description of each "Mode of Learning"
    - Role of Mentor(s) and Advisor(s)
    - Specific courses, workshops, and other didactics
    - Details on research meetings
  - Module: Career skills
    - Grantsmanship
    - "Responsible Conduct of Research" (separate section)
    - "Rigor and Reproducibility" (e.g., Biostats)
    - Becoming a Mentor
    - Research Group/Laboratory management

Module	Mentor(s)	Mode of learning
Scientific Area (1-3)	Specific names	Coursework (completed and new) 1-on-1 meetings (schedule? e.g., weekly) Guided readings Research meetings (schedule? e.g., weekly) Applied training Clinical experience
Career skills **Dissemination of Research Results** **Research management** **Mentorship**	All mentors	Improving communication skills Grant writing course Training in "Rigor & Reproducibility" Professional workshops/seminars Developing new collaborations Abstracts and manuscripts R01/Small grant application submission Supervising technical support personnel, organizing lab meetings, journal clubs e.g., training new lab members, undergraduate, summer students

- **Summary of coursework**
  - List previous relevant coursework
    - Highlight those addressing:
      - Proposed research
      - "Rigor & Reproducibility"
  - Proposed coursework
    - Course number and description
    - Include career development courses (e.g., grant writing, communication), Responsible Conduct of Research, Rigor & Reproducibility (e.g., Biostats)
    - Additional didactic activities
    - e.g., Offered by professional societies, workshops, symposiums

- Clinical and/or Teaching activities
  - Relationship to proposed research and career development activities/plan
  - Percentage of time for each activity (cal months)
- Restate % of time dedicated to research
- Timetable
- **Table: Career Development/ Training Activities During Award Period**

Career Development Activities	Year 1	Year 2	Year 3	Year 4	Year 5
Mentorship					
Mentor (name)– frequency (e.g., weekly) of individual meetings, frequency of lab meetings, frequency and listing of specific journal clubs, seminars, and other recurring relevant programs	X	X	X	X	X
Co-Mentor (name) – frequency (e.g., weekly) of individual meetings, frequency of lab meetings, frequency and listing of journal clubs, seminars, and other recurring relevant programs	X	X	X	X	X
Advisory Group – frequency (e.g., quarterly) of meetings	X	X	X	X	X

Career Development Activities	Year 1	Year 2	Year 3	Year 4	Year 5
Experimental Training					
Mentor (name) – Specific area of research and/or methodology	X	X	X	X	X
Co-Mentor (name) – Specific area of research and/or methodology	X	X	X		
Co-Investigator 1 (name) – Specific area of research and/or methodology		X	X		
Co-Investigator 2 (name) – Specific area of research and/or methodology			X	X	
Collaborator 1 (name) – Specific area of research and/or methodology		X	X	X	
Collaborator 2 (name) – Specific area of research and/or methodology			X	X	X
Formal Coursework					
Course #1: Specific Course # / Formal Title	X				
Course #1: Specific Course # / Formal Title		X			
Rigor and Reproducibility (e.g., Biostats)	X				
Responsible Conduct of Research and Related Policy Issues		X			
Funding for Research Activities			X		

Career Development Activities	Year 1	Year 2	Year 3	Year 4	Year 5
Workshops & Additional Training Programs					
Cold Spring Harbor Course on.....	X				
Woods Hole Workshop on.....	X	X			
American Association for.... Junior Investigators Training on.....			X		
CTSA "K to R" Program				X	
IRB 101 Course		X			
NYAS Science Alliance Sessions on.....	X	X	X	X	X
Scientific Conferences-Communication Skills (Oral / Poster Presentations)					
Symposium of the NY Academy of....(annual)	X	X	X	X	X
Congress of..... (annual)		X	X	X	X
American Association for..... (annual)		X	X	X	X
Society of..... (biannual)	X		X		X

Career Development Activities	Year 1	Year 2	Year 3	Year 4	Year 5
Mentoring Skills (responsibility shared with K mentors)					
Students (summer, undergraduate, medical)		X	X	X	X
Communication Skills (Written)					
Preparation of manuscripts for peer reviewed journals			X	X	X
Grant Writing					
CTSA pilot award for junior investigator	X	X			
Center for..... award for new investigators			X	X	
R01 preparation and submission (on research funded by K award)				X	X

	K99		R00		
Career Development Activities	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Mentorship					
Mentor (name)– frequency (e.g., weekly) of individual meetings, frequency of lab meetings, frequency and listing of specific journal clubs, seminars, and other recurring relevant programs	X	X			
Co-Mentor (name) – frequency (e.g., weekly) of individual meetings, frequency of lab meetings, frequency and listing of journal clubs, seminars, and other recurring relevant programs	X	X			
Advisory Group – frequency (e.g., quarterly) of meetings	X	X			

	K99		R00		
Career Development Activities	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Experimental Training					
Mentor (name) – Specific area of research and/or methodology	X	X			
Co-Mentor (name) – Specific area of research and/or methodology	X	X			
Co-Investigator 1 (name) – Specific area of research and/or methodology	X				
Co-Investigator 2 (name) – Specific area of research and/or methodology		X			
Collaborator 1 (name) – Specific area of research and/or methodology	X	X			
Collaborator 2 (name) – Specific area of research and/or methodology					
Formal Coursework – e.g., Graduate School, Public Health, Engineering					
Course #1: Specific Course # / Formal Title	X				
Course #1: Specific Course # / Formal Title		X			
Rigor & Reproducibility (e.g., Biostats)	X	X			
Responsible Conduct of Research	X				

	K99		R00		
Career Development Activities	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Workshops & Additional Training Programs					
Cold Spring Harbor Course on.....	X				
Woods Hole Workshop on.....	X	X			
American Association for.... Junior Investigators Training on.....			X		
CTSA "K to R" Program				X	
IRB 101 Course		X			
NYAS Science Alliance Sessions on.....	X	X			
Scientific Conferences-Communication Skills (Oral / Poster Presentations)					
Symposium of the NY Academy of....(annual)	X	X	X	X	X
Congress of..... (annual)		X	X	X	X
American Association for..... (annual)		X	X	X	X
Society of..... (biannual)	X		X		X

	K99			R00		
Career Development Activities	**Year 1**	**Year 2**		**Year 3**	**Year 4**	**Year 5**
Mentoring Skills						
Students (summer, undergraduate, medical)		X		X	X	X
Communication Skills (Written)						
Preparation of manuscripts for peer reviewed journals	X	X		X	X	X
Grant Writing						
Pilot award for junior investigator	X	X				
Center for..... award for new investigators				X	X	
R01 preparation and submission (on research funded by K award)					X	X

PHS 398 Career Development Award Supplemental Form

View Burden Statement

OMB Number: 0925-0001
Expiration Date: 09/30/2024

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1 + 12 Pages Combined

- **Candidate Information**
  - Section 2
- **Research Plan**
  - 3. Specific Aims (1 page)
  - 4. Research Strategy

3. Specific Aims (1 page)

4. Research Strategy

- Not overly ambitious
- Appropriate for the career level and of the applicant
- Appropriate for the length of the K award
- Achievable research goals
- Appropriate for the Mentor's expertise/background
- Appropriate for the Mentor's available funding
- Appropriate of the Institution's resources

4. Research Strategy

- (a) Significance
- (b) Innovation
- (c) Approach
- Includes Preliminary Studies

Relationship between Applicant's Proposed Research Plan and Mentor's Research Program?

What aspect of the Applicant's Proposed Research Plan will Form the Foundation of the Applicant's Research Program as an Independent Investigator Post-K Awardee?

4. Research Strategy – Preliminary Studies

- Aids reviewers in assessing the likelihood of project's feasibility and success
- Helps establishes the competence and experience of the Applicant
- Helps establish the effectiveness of the Mentee-Mentor relationship

4. Research Strategy – Preliminary Studies

- Helps demonstrate the availability of required "research resources" (e.g., patient population, unique animal model, reagents, databases, specialized instrumentation, etc.)
- Mentee-Mentor publications together on application's research area (First/Last Authorship)

4. Research Strategy – changes

Form	Section	Heading	Current language	Revised language
Career Development Award Supplemental Form	Research Plan - Research Strategy	Significance	Describe the scientific premise for the proposed project, including consideration of the strengths and weaknesses of published research or preliminary data crucial to the support of your application.	Describe the strengths and weaknesses in the rigor of the prior research (both published and unpublished) that serves as the key support for the proposed project.
Career Development Award Supplemental Form	Research Plan - Research Strategy	Approach	Not Applicable	Describe plans to address weaknesses in the rigor of the prior research that serves as the key support for the proposed project.

PHS 398 Career Development Award Supplemental Form

View Burden Statement

OMB Number: 0925-0001
Expiration Date: 09/30/2024

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Environment and Institutional Commitment to Candidate Section

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6. Training in the Responsible Conduct of Research

- Required instructional components:
  - Format: online only is not acceptable
  - Subject Matter: e.g., required topics
  - Faculty Participation
    - e.g., Role of the Mentor and other training faculty
  - Duration of Instruction (e.g., contact hours)
  - Frequency of Instruction
    - At every career stage, at least once every four years
    - Discuss any prior instruction
  - Don't do the minimum, e.g., IRB/IACUC programs
  - No more than 1 page
- http://grants.nih.gov/training/responsibleconduct.htm
- https://grants.nih.gov/grants/guide/notice-files/NOT-OD-22-055.html
- https://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-019.html

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https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.410-phs-398-career-development-award-supplemental-form.htm

8. Plans and Statements of Mentor and Co-Mentor(s)

- Mentor's assessment of the Candidate
- Mentor's research and career development plans for the Candidate
  - Research
  - Career development activities
    - Seminars, scientific meetings, presentations, becoming a mentor, RCR
- Expectations for publications

- What aspect of the research will the candidate be allowed to take to start their own independent research career
- Mentor's plans for providing mentoring and supervision
  - How this will promote candidate's development
- Plan for Candidate's Transition from Mentored Stage to Independent Investigator
- Candidate's additional responsibilities
  - Courses, seminars, lab meetings
  - Teaching, clinical, administrative

- Source of support for Candidate's research project
  - Grants
  - Core/shared facilities
  - Technical support
- Previous experience as a Mentor
  - Previous mentees - Type (e.g., graduate student, post-doctoral fellow, junior faculty), Number, Career Outcomes
- Mentor and Co-Mentors
  - How mentorship responsibilities will be shared
  - How different areas of expertise enhance mentorship
  - Past collaborative research/co-mentorship activities
- Addition instructions if clinical trials proposed
- No more than 6 pages

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9. Letters of Support from Collaborators, Contributors, and Consultants

- Advisory Committee (described in Section 2)
  - Purpose
    - Reviews research progress, publications, R01 submission, career development activities, didactic program
    - Provides scientific guidance
    - Documents meetings with an annual report
  - Name, title, and short paragraph on each member in Section 2
  - Each should provide a letter and NIH Biosketch

- Collaborators and Consultants (described in Section 2)
  - Name, title, and short paragraph on each individual in Section 2
  - Each should provide a letter and NIH Biosketch
- Director of Core Facility
- Source of "special" research resource (e.g., data set, patient samples, unique animal model/cell line/reagent)
- <u>No more than 6 pages</u>

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Environment and Institutional Commitment to the Candidate

- 10. Description of Institutional Environment
- 11. Institutional Commitment to the Candidate's Research Career Development
- 12. Description of Candidate's Contribution to Program Goals

Environment and Institutional Commitment to the Candidate

- 10. Description of Institutional Environment
  - Information relevant to Candidate's research and career development activities
    - Institution, Dept./Division, Institute
    - Other schools, centers, shared resources, core facilities, CTSA, etc.
    - Degree programs, courses, seminars, journal clubs
    - Institution's/Dept.'s formal mentoring program and other support mechanisms for junior faculty
  - <u>No more than 1 page</u>

Environment and Institutional Commitment to the Candidate

- 11. Institutional Commitment to the Candidate's Research Career Development
  - Letter from Dept. Chair/Institute Director
    - Specifics on protected time (most K awards: 75%)
    - Specifics on faculty appointment (full-time)
    - Statement that appointment and salary are not contingent on award
    - Statement on availability of research resources, personnel, office and research space, equipment, etc. required for project
    - Statement that mentors and collaborators will be able to provide time and support for mentoring/research responsibilities
    - Signed and dated on letterhead stationery
  - No more than 1 page

Environment and Institutional Commitment to the Candidate

- 12. Description of Candidate's Contribution to Program Goals
  - Required for applicants to "diversity-related" career development funding programs
    - e.g., Diversity-related K01's and K22's
  - Institutional letter
    - Addresses how the applicant's participation "will further the goals of the career development program to promote diversity in health-related research"
    - Do not include sensitive personal information (e.g., race or ethnic background, type of disability)
    - Signed (e.g., Dean/Dept. Chair) on letterhead stationery

RESEARCH & RELATED Other Project Information

OMB Number: 4040-0001
Expiration Date: 12/31/2022

1. Are Human Subjects Involved? Yes No

1.a. If YES to Human Subjects

Is the Project Exempt from Federal regulations? Yes No

If yes, check appropriate exemption number. 1 2 3 4 5 6 7 8

If no, is the IRB review Pending? Yes No

IRB Approval Date:

Human Subject Assurance Number:

2. Are Vertebrate Animals Used? Yes No

2.a. If YES to Vertebrate Animals

Is the IACUC review Pending? Yes No

IACUC Approval Date:

Animal Welfare Assurance Number:

10. Facilities & Other Resources

3. Is proprietary/privileged information included in the application? Yes No

4.a. Does this Project Have an Actual or Potential Impact - positive or negative - on the environment? Yes No

4.b. If yes, please explain:

4.c. If this project has an actual or potential impact on the environment, has an exemption been authorized or an environmental assessment (EA) or environmental impact statement (EIS) been performed? Yes No

4.d. If yes, please explain:

5. Is the research performance site designated, or eligible to be designated, as a historic place? Yes No

5.a. If yes, please explain:

6. Does this project involve activities outside of the United States or partnerships with international collaborators? Yes No

6.a. If yes, identify countries:

6.b. Optional Explanation:

7. Project Summary/Abstract — Add Attachment | Delete Attachment | View Attachment

8. Project Narrative — Add Attachment | Delete Attachment | View Attachment

9. Bibliography & References Cited — Add Attachment | Delete Attachment | View Attachment

10. Facilities & Other Resources — Add Attachment | Delete Attachment | View Attachment

11. Equipment — Add Attachment | Delete Attachment | View Attachment

12. Other Attachments — Add Attachments | Delete Attachments | View Attachments

R&R Other Project Information:

10. Facilities & Other Resources

Scientific/Technical Resources

- Facilities to be used for the conduct of the proposed research
  - Laboratory
  - Animal
  - Computer
  - Office
  - Clinical [patient/research subject populations]
  - Other: Core facilities [e.g., research pharmacy, biostatistics, technical cores (microscopy, biomarkers), biohazards]
- Discuss how the proposed studies will benefit from the unique features of the scientific environment, subject populations, or collaborative arrangements

R&R Other Project Information:

10. Facilities & Other Resources

Career Development Resources

- More complete descriptions of programs referenced in:
  - 2. Career Development/Training Activities During Award Period
  - 8. Plans and Statements of Mentor and Co-Mentor(s)
  - 10. Description of Institutional Environment
  - 11. Institutional Commitment to the Candidate's Research Career Development
- Helps establish the feasibility of the career development plan
- Cannot be used to avoid page limitations of other application sections

R&R Other Project Information:

10. Facilities & Other Resources

Career Development Resources - also referenced in "main body" of the grant (Table) and Mentor's section

- Career development programs
  - Institutional (e.g., Faculty Development programs)
  - Department/Institute
  - Professional societies
- Formal degree programs and other didactics
  - Degree program
  - Scientific courses: e.g., Statistics
  - Career Development courses: e.g., Funding & Grantsmanship
- Workshops, webinars, other training programs

Letters of Reference

- Include a list of Referees in the Cover Letter
- 3-5 Letters of References are required
- Individuals who know you well from a research perspective (qualifications, training, and interests)
- Individuals not directly involved in the research project
- Mentor(s) cannot be one of the confidential Letters of Reference ("letter" in main body of application)
- Helpful to include at least one referee who is not in your current department/institution

Letters of Reference

- "Potential to become an independent research scientist;
- Evidence of originality;
- Adequacy of scientific background;
- Quality of research endeavors or publications to date, if any;
- Commitment to health-oriented research; and
- Need for further research experience and training
- Any additional related comments that the referee may wish to provide"

https://grants.nih.gov/grants/how-to-apply-application-guide/submission-process/reference-letters.htm

Reference Letters vs. Letters of Support: What's the Difference?

Reference Letters	Letters of Support
When are they used?	
Used in Fellowships, mentored Career Development Awards, and other programs as requested	Used to demonstrate: -Institutional commitment or resources -Collaboration or role in the project -Potential or current user of a resource or service proposed in the application
Who writes them?	
Referees should be individuals not directly involved in the application, but who are familiar with the applicant's qualifications. The sponsor/co-sponsor(s) cannot be counted toward the 3 required references.	Collaborators, key personnel, institution, and other significant contributors to the scientific development or execution of the project
-Describe qualities and potential of candidate -Letters can be addressed to "To Whom It May Concern" or "Dear Reviewer"	-Describe the type of support your collaborators will provide to the project -Summarize the agreements you have in place to support your project
Who submits them?	
A referee submits the letters through eRA Commons (no login needed). The letters are maintained separate from the corresponding application.	Applicant organization submits the letters of support as part of the application.
Who sees them?	
Only reviewers and select NIH staff	Anyone with access to view the application
Where are the instructions?	
-Reference Letters page -Special instructions may also be found in funding opportunity announcements and notices	-"Application form instructions" on the How to Apply – Application Guide page. -Special instructions may also be found in funding opportunity announcements and notices (including Notices of Special Interest)

https://nexus.od.nih.gov/all/2019/09/11/reference-letters-vs-letters-of-support-whats-the-difference/

SF 424 (R&R) APPLICATION FOR FEDERAL ASSISTANCE Page 2

21. Cover Letter Attachment [ ] Add Attachment

21. Cover Letter Attachment

- Must include
- Title of application
- Title of funding opportunity announcement
- List of Referees (name and affiliation)
- Administrative document – not seen by reviewers

https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.200-sf-424-(r&r)-form.htm

PHS Assignment Request Form

OMB Number: 0925-0001
Expiration Date: 09/30/2024

Funding Opportunity Number:

Funding Opportunity Title:

Pre-populated from announcement information.

Awarding Component Assignment Suggestions (optional)

Awarding Component Assignment Suggestions (optional)

If you have a suggestion for an awarding component (e.g., NIH Institute/Center) assignment, use the link below to identify the appropriate short abbreviation (e.g., "NCI" for National Cancer Institute) and enter it below in the boxes for "Suggested Awarding Components". All suggestions will be considered; however, not all assignment suggestions can be honored.

Information about Awarding Component can be found here: https://grants.nih.gov/grants/phs_assignment_information.htm#AwardingComponents

Suggested Awarding Components:

Suggestions are considered with other assignment factors. Not all suggestions can be honored.

Study Section Assignment Suggestions *(optional)*

Study Section Assignment Suggestions *(optional)*

If you have a suggestion for a study section assignment, use the link below to identify a study section(s). Enter the short abbreviation for that study section in the boxes for "Suggested Study Sections." Remove all hyphens, parentheses, and spaces. All suggestions will be considered; however, not all assignment suggestions can be honored.

For example, enter "CAMP" if you wish to suggest assignment to the NIH Cancer Molecular Pathobiology study section, or "ZRG1HDMR" if you wish to suggest assignment to the NIH Healthcare Delivery and Methodologies SBIR/STTR panel for informatics.

Information about Study Sections can be found here: https://grants.nih.gov/grants/phs_assignment_information.htm#StudySection

Suggested Study Sections:
Only 20 characters allowed

Suggestions are considered with other assignment factors. Not all suggestions can be honored.

Rationale for assignment suggestions *(optional)*

Entry is limited to 1000 characters.

Up to 1000 characters.

https://grants.nih.gov/grants/ElectronicReceipt/files/Annotated_Forms_General_FORMS-H.pdf

PHS Assignment Request Form

List individuals who should not review your application and why *(optional)*

Entry is limited to 1000 characters.

Provide sufficient information (e.g., name organization affiliation) to correctly identify each individual. Provide specific reason why an individual should not review your application. Information will be considered, but listing an individual does not guarantee they will not be on review panel.

Identify scientific areas of expertise needed to review your application *(optional)*

Note: Do not provide names of individuals

Identify scientific areas of expertise needed to review your application *(optional)*

Note: Do not provide names of individuals

1

Expertise:
Each entry is limited to 40 characters

Limit your answers to expertise. DO NOT enter the names of individuals you'd like to review your application.

NIH Career Development (K) Application

- Model for other career development/ scholar grant programs supported by voluntary health organizations, private foundations, and professional societies

NIH "K" Sites of Interest

- K Kiosk – includes Program Announcements for K01, K07, K08, K22, K23, K25, and K99 grant mechanisms
  https://researchtraining.nih.gov/programs/career-development
- Career Development (K) Applications Instructions
  https://grants.nih.gov/grants/how-to-apply-application-guide.html
  https://grants.nih.gov/grants/how-to-apply-application-guide/forms-h/general/g.100-how-to-use-the-application-instructions.htm
- Reference Letters
  http://grants.nih.gov/grants/how-to-apply-application-guide/submission-process/reference-letter.htm

NIH "K" Sites of Interest

- Application Page Limits
  https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/page-limits.htm
- Formatting of Attachments (fonts, margins, etc.)
  https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/format-attachments.htm
- NIH Biosketch Format Pages, Instructions and Samples
  https://grants.nih.gov/grants/forms/biosketch.htm
- Instruction in the Responsible Conduct of Research
  https://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-019.html
  https://grants.nih.gov/grants/guide/notice-files/NOT-OD-22-055.html

NIH "K" Sites of Interest

- NIH Research Training and Career Development Programs
  https://researchtraining.nih.gov/
- Research Training and Career Development Programs at Specific Institutes
  https://researchtraining.nih.gov/institute

NIH: Upcoming Grant Application Changes

- New Notice of Funding Opportunities (NOFO's) to be issued (e.g., Parent Announcements expiring)
- New application Forms (FORMS-I)
- New Biosketch template - Commons Form (1/2025), then SciENcv (5/2025)
- New Peer Review Framework (applications submitted ≥1/25/2025)