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Overview of Federal Funding Opportunities and Fellowships That Support Early Career Faculty

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July 24, 2015

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Overview

In an increasingly competitive environment to earn federal grants, opportunities exist to help researchers at the beginning of their careers. This report contains an overview of federal government funding opportunities and fellowship programs that provide support for early career researchers working at universities or other non-government institutions. Some programs provide support for early career faculty, as well as postdoctoral researchers and new investigators.

The federal government programs described in this compendium of federal early career faculty opportunities are organized by the agency that runs the program. For each opportunity, there is provided a program summary, eligibility requirements, approximate size and type of award, annual due dates, and other special factors. The program websites are provided as a source for more detailed information.

Department of Defense

The Department of Defense (DOD) funds research that is relevant to its mission, predominately drawing from engineering, computer/information science, and physical sciences. However, DOD also provides some limited research and education opportunities in foreign languages, social sciences, and medical and life sciences.

Office of Naval Research (ONR) Young Investigator Program (YIP)

Overview: The Office of Naval Research (ONR) Young Investigator Program (YIP) supports investigators who demonstrate potential for innovative research related to the ONR science and technology priorities and are in their first or second full-time tenure-track position. Research proposals must support the ONR Department of Science and Technology initiatives, which include maneuver warfare, surveillance, intelligence, computing, ocean battlespace sensing, warfighter performance, and sea and air warfare and weapons. A complete listing of initiatives is available at http://www.onr.navy.mil/Science-Technology/Departments.aspx. The purpose of this program is to encourage researchers at institutes of higher education to contribute to the Department of the Navy's research program, as well as to promote careers in teaching and research.

Eligibility: Principal investigators must hold a first or second full-time tenure-track or tenure-track equivalent faculty position at an institute of higher education, having started his or her appointment within six years. Principal investigators must also be a U.S. citizen, national, or permanent resident.

Award Size: For FY 2015, ONR awarded a maximum of $170,000 per year for three years, with additional funds available for capital equipment. The individual annual award size includes funds paid to the university, including indirect costs.

Due Date: Proposal due dates for FY 2016 have not yet been announced, yet they historically have been due in January or March.

Source and Additional Information: http://www.onr.navy.mil/Science-Technology/Directorates/office-research-discovery-invention/Sponsored-Research/YIP.aspx, accessed June 30, 2015.

Air Force Office of Scientific Research (AFOSR) Young Investigator Research Program (YIP)

Overview: The Air Force Office of Scientific Research (AFOSR) Young Investigator Research Program (YIP) supports investigators who have earned a Ph.D. or equivalent degrees within the last five years. The purpose of this program is to help develop young investigators' careers and to enhance science and engineering research as it relates to the Air Force mission. YIP applicants may be considered for a Presidential Early Career Award for Scientists and Engineers (PECASE), which is the highest honor awarded by the Air Force to scientists and engineers beginning independent careers.

Eligibility: Principal investigators must be employed on a full-time basis and hold a regular position at a university or institute of higher education, industrial laboratory, or nonprofit research organization, and they must have earned their Ph.D. or equivalent degree within the last five years. Principal investigators must also be U.S. citizens, nationals, or permanent residents.

Award Size: In FY 2015, AFOSR estimates awards up to $120,000 per year for three years; however, exceptional proposals will be considered individually for higher funding and longer duration. Historically, there have been between 40 and 50 grants awarded each year.

Due Date: Applications are generally due in September.

Source and Additional Information: http://www.wpafb.af.mil/library/factsheets/factsheet.asp?id=9332, accessed June 30, 2015.

Defense Advanced Research Projects Agency (DARPA) Young Faculty Award (YFA)

Overview: Since 2006, the Defense Advanced Research Projects Agency (DARPA) has supported young faculty members' career and research development, as they relate to the mission and goals of the Department of Defense and DARPA's program development initiatives, through the Young Faculty Award (YFA). The YFA is designed to encourage innovative research and proposals from the next generation of researchers to advance science, technology, and engineering to resolve defense and national security issues. The program not only provides funding, but also mentoring as well as industry and defense networking.

Eligibility: Principal investigators must be within five years of appointment to full-time tenure-track or tenure-track equivalent faculty position at an institute of higher education. The YFA is not limited to U.S. citizens, and investigators without prior DARPA funding are emphasized.

Award Size: YFA awards have a maximum funding of $250,000 per year for a two-year period.

Due Date: For 2015, applications were due in April. Dates for the next cycle have not been announced.

Source and Additional Information: http://www.darpa.mil/work-with-us/for-universities/young-faculty-award, accessed June 30, 2015.

Army Research Office (ARO) Young Investigator Program (YIP)

Overview: The Army Research Office (ARO) Young Investigator Program (YIP) supports investigators who demonstrate potential for innovative research related to the ARO research priorities. The purpose of this program is to encourage researchers at institutes of higher education to contribute to the Department of the Army's research program, as well as to promote careers in teaching and research. YIP applicants may be considered for a Presidential Early Career Award for Scientists and Engineers (PECASE), which is the highest honor awarded by the Army to scientists and engineers beginning independent careers.

Eligibility: Principal investigators must be employed on a full-time basis and hold a regular position at a university or institute of higher education, industrial laboratory, or nonprofit research organization, and they must have earned their Ph.D. or equivalent degree within the last five years. Principal investigators must also be U.S. citizens, nationals, or permanent residents.

Award Size: YFA awards are usually $50,000 per year for a three-year period.

Due Date: This award is part of a long-term broad agency announcement (BAA) and has an open deadline.

Source and Additional Information:
http://www.arl.army.mil/www/pages/8/research/Final_Post_ARL_BAA_W911NF-12-R-0011.pdf, accessed June 30, 2015.

Congressionally Directed Medical Research Program (CDMRP) New Investigator Awards

Overview: The Congressionally Directed Medical Research Program (CDMRP) New Investigator Awards support early career faculty research in specific program areas, including Autism, bone marrow failure, breast cancer, prostate cancer, and Neurofibromatosis. Certain programs within the CDMRP may offer New Investigator Awards as part as their call for funding opportunities.

Eligibility: Principal investigators must be employed on a full-time basis and hold a regular position at a university or institute of higher education, industrial laboratory, or nonprofit research organization, and they must have earned their Ph.D. or equivalent degree within the last five years. Principal investigators must also be U.S. citizens, nationals, or permanent residents.

Award size: Award size varies based on available funding and by program.

Due Date: Deadlines vary by program.

Source and Additional Information: http://cdmrp.army.mil/, accessed June 30, 2015.

National Security Agency (NSA) Mathematical Science Program (MSP)

Overview: The National Security Agency (NSA) Mathematical Science Program (MSP) supports research in algebra, number theory, discrete mathematics, probability, and statistics to improve investigative methods of computation. The program is comprised of three types of grants, including the Young Investigators grant, which provides funding for investigators within 10 years of earning a Ph.D.

Eligibility: Investigators must be within 10 years of having earned a Ph.D. Awards will be made only to non-profit institutions. Principal investigators must also be U.S. citizens, nationals, or permanent residents.

Award Size: The NSA MSP funds researchers for up to $20,000 for two months of summer salary for up to two years. As part of the $20,000 maximum, "graduate student support (other than tuition) not to exceed $5,000 (including fringe and direct costs) per student per year," may be part of the request.

Due Date: Deadlines are generally in October.

Source and Additional Information: http://sam.msp.berkeley.edu/nsa-ams/about/program/guidelines.html, accessed June 30, 2015.

Department of Education

The Department of Education offers a number of discretionary grants in the areas of the enhancement of education policy, educational environments, and educator capabilities. Most research-related grants are delivered through the Institute of Education Sciences (IES).

Research Training Program in Special Education: Early Career Development and Mentoring

Overview: This program is funded through IES and provides support for early career researchers in the areas of special education and early intervention in order to help train a robust cohort of new researchers in institutions of higher education. The program provides support to early investigators to help develop "methodological, content, and grant writing expertise needed to build a strong line of research that includes federal funding by providing protected time during which they can concentrate more intensively on developing their research skills and program of research." It is required that grantees work closely with an experienced researcher during the length of this project funding. For this program, all applications must fit within one of the identified research areas for IES' National Center for Special Education Research: Autism Spectrum Disorders; Cognition and Student Learning in Special Education; Early Intervention and Early Learning in Special Education; Families of Children with Disabilities; Mathematics and Science Education; Professional Development for Teachers and Related Services Providers; Reading, Writing, and Language Development; Social and Behavioral Outcomes to Support Learning; Special Education Policy, Finance, and Systems; Technology for Special Education; and Transition outcomes for Secondary Students with Disabilities.

Eligibility: Principal investigators must be within three years of completing their doctoral degree or postdoctoral program and must hold a tenure track position or accepted an offer for such a position. PIs must have a mentor, defined as an Associate Professor or Professor level university employee. The mentor does not need to be at the same institution at the applicant. The mentor may not be the same advisor that the applicant used for graduate school or dissertation.

Award Size: The maximum total award size is $400,000 (including both direct and indirect costs). The maximum length of the award is four years but can vary depending on the proposed research. For FY 2016, no more than five awards are expected.

Due Date: For the FY 2016 competition, letters of intent were due in May and the complete application in August.

Source and Additional Information:
http://ies.ed.gov/funding/ncser_rfas/ncser_earlycareer.asp?rfa=part0, accessed July 14, 2015.

Statistical and Research Methodology in Education–Early Career

Overview: This program is a specific funding opportunity for early career researchers completing work that will lead to "tools and techniques that can be used by mainstream education researchers to improve the design of research studies, the analysis of research data, and the interpretation of research findings." It is expected that researchers "develop new methodological approaches, to extend and improve existing methods, and to create other tools that would enhance the ability of researchers to

conduct high quality, scientific education research… Researchers should plan for disseminating their results to a wide range of audiences including researchers who may further develop he methods, applied education researchers who may directly apply the methods in their own work, and, when applicable, practitioners and policymakers who may consider the results from such methods."

Eligibility: Principal investigators must be within four years of completing their doctoral degree. Additionally, the "research personnel on the grant must also include a more senior advisor to the PI or an advisory board, with the limitation that the PI's dissertation advisor cannot be the mentor or be a member of the advisory board. The Institute expects that the PI will be the lead author on publications pertinent to the primary research questions from Early Career grants."

Award Size: The maximum award is $100,000 per year, for two years. For FY 2016, no more than four awards are expected.

Due Date: For the FY 2016 competition, letters of intent were due in May and the complete application in August.

Source and Additional Information: http://ies.ed.gov/funding/ncer_rfas/methodology_earlycareer.asp, Accessed July 14, 2015

Department of Energy

The Department of Energy (DOE) funds research that is relevant to its mission of advancing the national, economic, and energy security of the U.S. DOE supports research in a broad range of basic and applied sciences. It is the principal federal funding agency of research programs in high-energy physics, nuclear physics, and fusion energy sciences. It also manages fundamental research programs in basic energy sciences, biological and environmental sciences, and computational science and is the federal government's largest single provider of funds for materials and chemical sciences. Other research areas include climate change, geophysics, genomics, life sciences, nanotechnology, fossil energy, and nuclear medicine.

Early Career Research Program

Overview: The Early Career Research Program supports the development of individual research programs of outstanding scientists early in their careers and stimulates research careers in the disciplines supported by the DOE Office of Science. Opportunities exist in the following program areas: Advanced Scientific Computing Research (ASCR); Biological and Environmental Research (BER); Basic Energy Sciences (BES), Fusion Energy Sciences (FES); High Energy Physics (HEP), and Nuclear Physics (NP).

Eligibility: The Principal Investigator must be an untenured Assistant Professor or an untenured Associate Professor on the tenure track at a U.S. academic institution as of the deadline for the application. No more than ten (10) years can have passed between the year the Principal Investigator's PhD was awarded and the year of the deadline for the application. There can be no co-Principal Investigators. There is no US citizenship requirement for the Principal Investigator or any project participants.

Award Size: In 2014, DOE anticipated making between 10 and 20 awards with a minimum of $750,000 over five years. Applicants are encouraged to propose research expenditures as close to the funding minimum as possible.

Due Date: Mandatory pre-applications were due at 5 pm eastern time on September 11, 2014. Only applicants notified by DOE to submit a formal application may submit full applications. Full applications from those encouraged to submit them were due by 5 pm eastern time November 20, 2014. This program has not announced its FY 2016 dates.

Source and Additional Information:
http://science.energy.gov/~/media/grants/pdf/foas/2014/SC_FOA_0001170.pdf, accessed June 29, 2015.

Department of Health and Human Services

National Institutes of Health

The primary mission of the National Institutes of Health (NIH) is to "seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce illness and disability." You may refer to the listed program's corresponding link to see which of NIH's 27 Institutes and Centers (ICs), as well as which agencies within the Department of Health and Human Services (HHS), are collaborating on each program and to determine the areas of early career study that are relevant.

According to NIH, an Early Stage Investigator "has completed his or her terminal research degree or medical residency—whichever date is later—within the past 10 years and has not yet been awarded a substantial, competing NIH research grant." Additionally, a new investigator is defined as "an NIH research grant applicant who has not yet completed successfully for a substantial, NIH research grant." Independent research denotes the ability to commit institutional facilities, space, and resources to conduct the research project; all of which is necessary to apply for R01 grants.

Source and Additional Information: http://grants.nih.gov/grants/new_investigators/index.htm.

NIH Mentored Research Scientist Development Award (Parent K01)

Overview: Although not strictly an "early career" award, the NIH Research Scientist Development awards "provide support and 'protected time' (three, four, or five years) for an intensive, supervised career development experience in the biomedical, behavioral, or clinical sciences leading to research independence. Although all of the participating NIH Institutes and Centers (ICs) use this support mechanism to support career development experiences that lead to research independence, some ICs use the K01 award for individuals who propose to train in a new field or for individuals who have had a hiatus in their research career because of illness or pressing family circumstances." Before submitting the application, the applicant must identify a mentor who will supervise the research and career development.

Eligibility: To be eligible for this award, the recipient may not be a former PI for an NIH R01, R29, P01, center grant, or other K-series award. Applicants must have a research or health-professional doctoral degree. At the time of award, the recipient must be a citizen or permanent U.S. resident.

Award Size: Awards support budgets composed of salary and other program-related expenses. Additionally, the facilities and administrative costs are reimbursed at eight percent of modified total direct costs. The project is limited to a maximum of five years.

Due Date: Applications are due in three annual cycles: February 12, June 12, and October 12.

Source and Additional information: http://grants.nih.gov/training/careerdevelopmentawards.htm, accessed July 16, 2015

NIH Independent Scientist Award (Parent K02)

Overview: The NIH Independent Scientist Award (K02) provides three to five years of salary support and 'protected time' for newly independent scientists, to conduct an intensive research focus to bolster and enhance their careers.

Eligibility: Candidates must have a doctoral degree and newly independent, peer reviewed research support at the time the award is made. Some participating NIH ICs require the applicant to already have some form of NIH research support, while others accept applications from investigators who have support from other sources. By the time of award, applicants must be citizens, nationals, or permanent residents of the U.S. Those on temporary or student visas are not eligible.

Award Size: Awards support budgets composed of salary and other program-related expenses. Additionally, the facilities and administrative costs are reimbursed at eight percent of modified total direct costs.

Due Date: Applications are due in three annual cycles: February 12, June 12, and October 12.

Source and Additional Information: http://grants.nih.gov/grants/guide/pa-files/PA-14-045.html, accessed May 20, 2015.

NIH Academic Career Development Award (Parent K07)

Overview: The NIH Academic Career Award (K07) supports Development Awards to ensure diversity among scientists in appropriate scientific disciplines to advance the NIH mission. The award provides junior level candidates three to five years of salary and research support for developing academic and research expertise in a particular health-related field. The goal of the award is for the candidate to "become a successful academic researcher in the chosen area." Additionally, "research, teaching, and leadership skills are to be learned during the tenure of the award. Curriculum building skills are encouraged. A mentor is required. A minimum of nine person-months (75%) of full-time professional effort is required annually; the remainder may be devoted to other research related and/or teaching pursuits consonant with the objectives of the award."

Eligibility: Candidates must have a clinical, research, or health-professional doctoral degree and may not be a PI on any other PHS career awards, R01s, P01s, P50s, or equivalent non-PHS grants over $100,000 in direct costs per year. Candidates must also identify a mentor with appropriate research experience related to the proposed research development plan. Other eligibility requirements vary depending on which IC has issued the announcement. By the time of award, applicants must be citizens, nationals, or permanent residents of the U.S. Those on temporary or student visas are not eligible.

Award Size: Awards support budgets composed of salary and other program-related expenses for up to five years. Additionally, the facilities and administrative costs are reimbursed at eight percent of modified total direct costs.

Due Date: Applications are due in three annual cycles: February 12, June 12, and October 12.

Source and Additional Information: http://grants1.nih.gov/grants/guide/pa-files/PA-11-192.html, accessed July 15, 2015.

Career Transition Awards (K22) (Example: National Institute of Allergy and Infectious Diseases (NIAID) Career Transition Award)

Overview: The objective of the NIAID Career Transition Award is to support postdoctoral fellows transitioning to positions of assistant professor or the equivalent, and help them to develop a successful biomedical career as an independent research scientist.

Eligibility: Candidates for this award must have a terminal research or clinical doctoral degree and no more than five years of related postdoctoral research experience at the time of the initial application or resubmission. Applicants must also have not been a PI on NIH research grants, career development awards, or other equivalent research grants over $100,000 in direct costs per year. In order to activate the K22 award, applicants need to secure a tenure-track full-time assistant professor position within one year of the receipt of the approval letter. By the time of award, applicants must be citizens, nationals, or permanent residents of the U.S.

Award Size: This award is not to exceed two years. For the first year of the award, NIAID will contribute up to $150,000 in total direct cost, and in the second year up to $100,000 in total direct cost toward the research development costs. NIH will not contribute more than $50,000 per year toward salary. Additionally, the facilities and administrative costs are reimbursed at eight percent of modified total direct costs.

Due Date: Applications are due in three annual cycles: February 12, June 12, and October 12.

Source and Additional Information: http://grants.nih.gov/grants/guide/pa-files/PAR-12-156.html, accessed July 15, 2015.

NIH Pathway to Independence Award (Parent K99/R00)

Overview: "The primary purpose of the Pathway to Independence Award (K99/R00) program is to increase and maintain a strong cohort of new and talented NIH-supported independent investigators. The program is designed to facilitate a timely transition from a mentored postdoctoral research position to a stable independent research position with independent NIH or other independent research support at an earlier stage than is currently the norm."

Eligibility: Candidates must have a clinical or research doctorate, have no more than five years of postdoctoral research training at the time of application, and have not already obtained a full-time tenure track assistant professor position (or equivalent). Applicants can be citizens, nationals, or permanent residents of the U.S. For foreign applicants, the applicant U.S. institution must determine and document in the application that the applicant's visa will allow him or her to remain in this country long enough to take appropriate advantage of the award.

Award Size: The award will support up to five years of funding for both phases. The mentored, K99, phase provides support for up to two years for the candidate to train, complete research, publish results, and bridge to an independent research position. For this phase, the total cost per year should

not exceed $90,000. Additionally, the facilities and administrative costs are reimbursed at eight percent of modified total direct costs. Following the mentored phase, the individual may request up to three years of support to conduct independent research as a tenure-track full-time assistant professor at an extramural sponsoring institution or organization. For the R00 phase, the total cost may not exceed $249,000 per year, and the indirect costs will be reimbursed at the extramural sponsoring institution's indirect cost rate.

Due Date: Applications are due in three annual cycles: February 12, June 12, and October 12.

Source and Additional Information: http://grants1.nih.gov/grants/guide/pa-files/PA-11-197.html, accessed July 15, 2015.

NIH Director's New Innovator Award Program (DP2)

Overview: The NIH Director's New Innovator Award (DP2) was first started in 2007 in an effort to support a small number of early stage investigators for their creativity, and who propose highly innovative research approaches that could produce profound solutions to broad areas of biomedical and behavioral research. This initiative is part of the NIH Common Fund's High-Risk Research Program.

Eligibility: Applicants must be early stage investigators, defined as individuals who have not previously been granted a significant NIH independent research award and are within 10 years of completing a terminal research degree or medical residency. Candidates must hold an independent research position at a U.S. institution. Investigators still undergoing training or mentoring (postdoctoral fellows) are not eligible to apply unless they have a written commitment of an independent faculty position from an institution. There are no citizenship or residency requirements. Foreign scientists are eligible to apply as long as they are conducting their research and holding an independent position at a U.S. institution.

Award Size: According to the most recent RFA, in FY 2014-2016 NIH intends to commit an estimated $80 million for approximately 33 awards. Awards are up to $300,000 in direct costs each year for five years, plus applicable facilities and administrative costs that will be determined at the time of award. The maximum project period is five years.

Due Date: Applications are typically due in October. Applications for this period are due October 15, 2015.

Source and Additional Information: http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-13-007.html, accessed July 15, 2015.

NIH Director's Early Independence Awards (DP5)

Overview: The NIH Director's Early Independence Award supports investigators to pursue independent research directly after completion of their terminal doctoral degree or clinical residency, thereby enabling them to skip the traditional post-doctoral training period. For investigators "who have established a record of scientific innovation and research productivity and who have demonstrated unusual leadership, drive, and maturity, post-doctoral training would unnecessarily delay their entry into performing independent research. The NIH Director's Early Independence Awards also provide an

opportunity for institutions to invigorate their research programs by bringing in the fresh perspectives of the awardees that they host."

Eligibility: According to the most recent RFA, the individual either 1) must have received a terminal doctoral degree or completed medical residency within the preceding twelve months of applying or 2) within the following twelve months must complete all the requirements for a doctoral degree or complete a medical residency. At the time of application, the PD(s)/PI(s) must not have served as a post-doctoral fellow following a previous doctoral degree for more than one year. The application must include a written commitment to an independent research position at a host institution that will be activated no later than the start date of the Early Independence Award. There are no citizenship or residency requirements. Foreign scientists are eligible to apply if they are applying through a U.S. institution.

Award Size: According to the most recent RFA, NIH intends to commit an estimated $4 million for approximately 10 awards in FY 2015. Awards are up to $250,000 in direct costs each year for five years, plus applicable facilities and administrative costs that will be determined at the time of award. The maximum project period is five years.

Due Date: Letters of intent are typically due in late December and applications are typically due in late January.

Source and Additional Information: http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-14-004.html, accessed July 15, 2015.

Food and Drug Administration

The Food and Drug Administration (FDA) is an agency within the Department of Health and Human Services that is primarily responsible for the regulation and oversight of food safety, tobacco products, dietary supplements, prescription and over-the-counter drugs, vaccines , medical devices, and veterinary products, just to name a few.

In addition to the FDA's regulatory function to protect and promote public health, the agency also conducts research and development activities that support this regulatory role. The FDA's Fellowship, Internship, Graduate, and Faculty Programs give individuals opportunities to pursue careers in science, but specifically at the FDA. The FDA's National Center for Toxicological Research (NCTR) sponsors a Postgraduate Research Program that is administered by the Oak Ridge Institute for Science and Education (ORISE). This program is for recent postgraduates (within 3 years; postdoctoral, predoctoral and postbaccalaurate) to conduct 1-3 years of independent research complementing NCTR research priorities. Applications are accepted year-round.

Source and Additional Information:
http://www.fda.gov/AboutFDA/WorkingatFDA/FellowshipInternshipGraduateFacultyPrograms/default.htm, accessed July 15, 2015.

Environmental Protection Agency

Science guides the regulatory decision-making of the Environmental Protection Agency (EPA). Utilizing intramural EPA laboratories as well as the extramural research community, the EPA Office of Research and Development (ORD) conducts research on topics such as air and water quality, ecosystem assessment and restoration, climate change, impacts to human health, and pollution prevention. EPA has limited extramural opportunities for university researchers given that EPA, like a number of other agencies, utilizes its own labs and federal experts. That said, opportunities exist to complement EPA research efforts.

EPA does offer early-career awards, but they generally are embedded within a regular solicitation. For example, EPA may release an extramural research solicitation through its Science to Achieve Results (STAR) grant program (which is its primary extramural grants program located within ORD; http://www.epa.gov/ncer/rfa/), and it may estimate making seven awards, five of which might be regular awards and two of which might be early-career awards.

National Aeronautics and Space Administration

The National Aeronautics and Space Administration (NASA) conducts space exploration work in five principal categories: Science, Aeronautics, Space Technology, Exploration, and Operations. The Science directorate explores the Earth, Sun, planets, and the Universe. The Aeronautics mission directorate designs and tests new flight technologies that bolster exploration and lead to improved flight capabilities on Earth. The Space Technology program invests in potentially game-changing technology with applications across NASA mission directorates. The Exploration and Operations directorates concentrate on the International Space Station and developing new methods for human exploration in space. In education, NASA activities include support for scientific training in fields relevant to NASA's mission as well as general outreach using space to inspire interest in technical issues and careers.

Space Technology Research Opportunities for Early Career Faculty

Overview: The Space Technology Research Opportunities for Early Career Faculty supports tenure-track faculty pursuing research related to the development of technologies to support the future space science and exploration needs of NASA. These technologies should be in the earliest stages of development, and align with the NASA Space Technology Roadmaps, including communication and navigation systems; human health, life support and habitation systems; human exploration destination systems; and materials, structures, mechanical systems, and manufacturing. Topics may change in future competitions.

Eligibility: Eligible applicants include accredited U.S. institutions of higher education. The principal investigator must be a recent Ph.D. recipient that cannot be more than seven years beyond their date of graduation when the solicitation is released. Awardees must also be untenured assistant professors at the time of both the application and award. Fellows must be U.S. citizens or permanent residents. Co-investigators are not permitted.

Award Size: Awards are typically $200,000 per year for up to three years. Between six and eight awards were expected in 2015.

Due Date: Proposals were due April 17, 2015. Future due dates have not yet been announced.

Sources and Additional Information:
http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={7A148E0E-4834-3C10-BADB-0C5060C4F961}&path=closedPast and
http://www.nasa.gov/offices/oct/stp/strg/index.html, accessed July 1, 2015.

New (Early Career) Investigator Program in Earth Science

Overview: The New Investigator Program in Earth Science supports early career faculty pursuing research related to topics supported by NASA's Earth Science Division in carbon cycle and ecosystems, climate variability and change, water and energy cycle, atmospheric composition, weather, and earth surface and interior. Proposals are also required to contain a significant outreach or education component.

Eligibility: Eligible applicants include accredited U.S. institutions of higher education as well as museums, observatories, and government or nonprofit research institutions that conduct earth science research. The principal investigator must be a recent Ph.D. recipient that cannot be more than five years beyond their receipt of a doctoral degree when the solicitation is released. Awardees must also be untenured at the time of the submission deadline. Applicants must be U.S. citizens or permanent residents. Co-investigators are not permitted.

Award Size: Awards are approximately $80,000- $90,000 per year for up to three years duration, with an estimated 12 proposals funded in 2015.

Due Date: Proposals are solicited approximately every two years, with the most recent competition having been held in June, 2015.

Source and Additional Information:
http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={B8991E29-00AA-48D8-0380-FBE428CF2EAE}&path=open, accessed July 1, 2015.

Fellowships for Early Career Researchers in Planetary Science

Overview: The Fellowships for Early Career Researchers supports postdoctoral researchers in planetary science and provides supplemental funds for transitioning to a tenure-track or equivalent position. Participation is limited to specific planetary science research programs that are outlined in the solicitation. If selected for the fellowship, and later promoted to a permanent position, researchers are eligible for *Fellowship Start-up Funds,* to help with research as early-career, permanent, researchers.

Eligibility: Applicants for the Early Career Fellowships must be postdoctoral researchers, research assistants, or equivalent non-tenured researchers who have received their doctoral degree no earlier than seven years prior to the competition year. Tenure-track faculty are not eligible for the fellowship, but if they obtain a permanent position while they are fellows, they are eligible for Start up Funds, within 10 years of completing their doctoral program. Applicants must be U.S. citizens or permanent residents.

Award Size: Awards vary in size and provide up to three years of support. Fellowship Start-up Funds are up to $100,000. One to three awards is given each competition in each planetary science research program.

Due Date: Proposal due dates vary by research program associated with the Research Opportunities in Space and Earth Sciences (ROSES) program.

Sources and Additional Information:
http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={9F1341A9-6D0F-F075-C993-276263B186ED}&path=future, accessed July 1, 2015.

Nancy Grace Roman Technology Fellowships in Astrophysics for Early Career Researchers

Overview: The purpose of the Nancy Grace Roman Technology Fellowship (RTF) is to support early-career astrophysicists, and the development of innovative technologies for space astrophysics. In their

first year, fellows generate plans for astrophysics technology. If the plans are accepted, there are subsequent phases for development and start-up funding.

Eligibility: Applicants for the Roman Technology Fellowships must be early career researchers who have received their doctoral degree no earlier than seven years prior to the competition year. Applicants must be U.S. citizens or permanent residents.

Award Size: The maximum award size for the design phase is $100,000, with an additional $300,000-$500,000 available for the four-year, development phase. Between three and six awards are expected for the design phase of the fellowship.

Due Date: Applications are due November 6, 2015.

Sources and Additional Information:
http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={9F1341A9-6D0F-F075-C993-276263B186ED}&path=future, and http://science.nasa.gov/researchers/sara/student-programs/nancy-grace-roman-technology-fellowships-astrophysics-early-career-researchers/, accessed July 1, 2015.

National Endowment for the Arts

The National Endowment for the Arts (NEA) is the federal resource that supports traditional art forms including music, dance, and theater projects. The agency provides opportunities for the funding of art promotion and for enhancing access to the arts for underserved or underserved populations.

Literature Fellowships

Overview: This program provides grants to published creative writers and translators of exceptional talent in the areas of prose and poetry. This Program alternates annually between fellowships in prose and poetry. The next competition will be in poetry.

Eligibility: Creative writers who published qualifying work between January 1, 2006 and February 28, 2013 are eligible to apply. Additional details on qualifying published work are available at http://nea.gov/grants/apply/Lit/eligibility.html. No specific citizenship requirements are listed on the solicitation.

Award Size: NEA Literature Fellowships award $25,000 grants, with an average success rate of five percent.

Due Date: Applications were due by March 11, 2015 for projects beginning in January 2016.

Source and Additional Information: http://arts.gov/grants/apply-grant/grants-individuals, accessed July 1, 2015.

National Endowment for the Humanities

The National Endowment for the Humanities (NEH) is the largest federal funding resource for research in the humanities. By providing funding to individual scholars and institutions, NEH strives to bolster humanities teaching, facilitate scholarship, and preserve educational and cultural resources.

Fellowships

Overview: The award funds individuals conducting research valuable to humanities scholars and/or general audiences. Projects generally result in articles, monographs, books, digital materials, archaeological site reports, translations, editions, or other scholarly resources.

Eligibility: Researchers, teachers, and writers are all eligible to apply regardless of institutional affiliation. "U.S. citizens who live inside or outside the U.S. are eligible. Foreign nationals are also eligible if they have been residing in the U.S. or its jurisdictions for at least three years prior to the application deadline."

Award Size: Awards support six to twelve months of full time work issued in stipends of $4,200 per month. Historically, 83 awards have been granted per year, on average, a funding ratio of seven percent.

Due Date: Applications are due by April 28, 2016 for projects beginning January 2017.

Source and Additional Information: http://www.neh.gov/grants/research/fellowships, accessed July 1, 2015.

Fellowships for Advanced Social Science Research on Japan

Overview: This award provides support for research on modern Japanese society, political economy, international relations, and relations with the U.S. The research endeavor should have a regional, global, and comparative focus.

Eligibility: Researchers, teachers, and writers are all eligible to apply regardless of institutional affiliation. "U.S. citizens who live inside or outside the U.S. are eligible. Foreign nationals are also eligible if they have been residing in the U.S. or its jurisdictions for at least three years prior to the application deadline."

Award Size: Awards support six to twelve months of full time work issued in stipends of $4,200 per month. Historically, the program has awarded an average of two awards per year, funding eight percent of applications.

Due Date: Applications are due by April 28, 2016, for projects beginning January 2017.

Source and Additional Information: http://www.neh.gov/grants/research/fellowships-advanced-social-science-research-japan, accessed July 1, 2015.

Summer Stipends

Overview: This program provides funding for individuals pursuing advanced humanities research.

Eligibility: Researchers, teachers, and writers are all eligible to apply regardless of institutional affiliation. All U.S. citizens and foreign nationals who have lived in the U.S. or its jurisdictions for at least three years prior to the application deadline are eligible.

Award Size: Awards total $6,000 for two consecutive months of full-time work, generally in the summer but possibly during other times of the year. Historically, there has been an average of 81 grants per year, funding nine percent of applications.

Due Date: Applications are due by October 1, 2015, for projects beginning May 2016.

Source and Additional Information: http://www.neh.gov/grants/research/summer-stipends, accessed October 8, 2013.

National Science Foundation

The National Science Foundation (NSF) funds basic research in all areas of science and engineering. This includes research on social, behavioral, and economic sciences as well as science, technology, engineering, and mathematics (STEM) education.

Faculty Early Career Development Program (CAREER)

Overview: This prestigious NSF-wide program provides funding to pre-tenured faculty for integrated research and education activities. Awards provide funding for five years of support.

Eligibility: Applicants must hold a doctoral degree in a field supported by NSF by the submission deadline. Applicants must be Assistant Professors (or equivalent) in a tenure-track position by October 1 of the application year at an institution based in the US or its territories. Applicants cannot obtain tenure before October 1 of the application year or have had a previous CAREER award. There are no eligibility requirements related to citizenship.

Award Size: Awards total at least $400,000 over five years and at least $500,000 over five years in the Directorate for Biological Sciences (BIO), the Directorate for Engineering (ENG) and the Division of Polar Programs (PLR).

Due Date: Proposal due dates vary by directorate from July 21- 25, 2015. Deadlines for future years have not yet been announced.

Source and Additional Information: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503214, accessed July 15, 2015.

Computer and Information Science and Engineering (CISE) Research Initiation Initiative (CRII)

Overview: This new program within the Directorate for Computer and Information Science and Engineering (CISE), was created "with the goal of encouraging research independence immediately upon obtaining one's first academic position after receipt of the PhD." Thus, ", it is expected that funds will be used to support untenured faculty or research scientists (or equivalent) in their first two years in a primary academic position after the PhD, but not more than a total of five years after completion of their PhD."

Eligibility: Applicants must hold a doctoral degree, and a primary appointment in computer and/or information science and/or engineering, or in a related field. Additionally, applicants must be untenured, and in the first two years of a tenure-track or research science position, or equivalent. Applicants may not have received any grants as a PI from any federal government agency or department, including the CAREER program.

Award size: Awards total a maximum of $175,000 for up to two years. NSF expects to make between 35 and 40 awards for FY 2016.

Due Date: Proposals are due by September 30, 2015.

Source and Additional Information: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504952, accessed July 15, 2015

Relevant Agencies Not Currently Offering Funding for Specific Early Career Opportunities

U.S. Department of Agriculture

The U.S. Department of Agriculture's (USDA) primary mission is to regulate and implement public policy for the nation's food, agriculture, and natural resources. However, there are offices within USDA which support extramural research opportunities. The National Institute of Food and Agriculture (NIFA) is the primary extramural research and grant making agency of the USDA. Through the grants offered by NIFA, the USDA is able to conduct research critical to farmers, consumers, and communities. (In 2008, NIFA was created as a replacement for the organization formerly known as the Cooperative State Research, Education, and Extension Service.)

Although NIFA supports a wide variety of research programs and one of its most prestigious programs is the NIFA Fellowships Grant Program, this program is open only to students pursuing their doctoral degree. There are no opportunities strictly for "early career" researchers.

Centers for Disease Control and Prevention

The mission of the CDC is to protect and improve public health through information that enhances health decision-making and partnerships with state health departments and other organizations. The CDC focuses on developing and applying disease prevention and control policies, especially in infectious diseases, environmental health, occupational safety and health, health promotion, prevention and education activities. The CDC does not provide opportunities specifically for early career faculty researchers or new investigators at this time.

Department of State

The Department of State supports a limited number of international social science grants each year. Many of these grants focus on international public policy, governance, and/or human rights. Currently the State Department does not support early career faculty researchers based at US academic institutions.

Department of Transportation

The Department of Transportation (DOT) oversees federal highway, air, rail, maritime, and other transportation administration activities and functions. The Research and Innovative Technology Administration (RITA) oversees and coordinates DOT's research and education programs. DOT distributes research funds to state and local transportation agencies as well as academic institutions. DOT does not currently offer support for early career faculty researchers.

Department of Homeland Security

The Science and Technology (S&T) Directorate is the primary research and development arm of the Department of Homeland Security (DHS). The Directorate has three portfolios that address basic research through advanced technology development and transition, spanning six primary divisions that address critical homeland security needs: Borders and Maritime Security; Chemical and Biological; Command, Control, and Interoperability; Explosives; Human Factors and Behavioral Sciences; and Infrastructure and Geophysical.

While DHS does not support early career faculty fellows hosted at academic institutions, there are some relevant programs that support researchers based at DHS laboratories (these programs are not specific to early career faculty researchers):

> Transportation Security Laboratory Visiting Scientist Program
> http://www.orau.gov/DHS-TSLvisSciProg/programdesc.html
> Plum Island Animal Disease Center (PIADC) Research Participation Program
> http://www.orau.gov/piadc/gen-info.htm and http://www.orau.gov/piadc/research.htm

Department of Housing and Urban Development

The U.S. Department of Housing and Urban Development's (HUD) mission is to foster community development and affordable housing. While better known as the federal entity that provides funding for low-income or public housing, HUD also has limited resources to support research related to urban development, sustainability, housing, etc. While HUD has previously supported new investigator and postdoctoral programs, the agency does not fund any programs specifically for those researchers at this time.

Health Resources and Services Administration

The Health Resources and Services Administration (HRSA), an agency of the Department of Health and Human Services (HHS), is the primary federal agency for improving access to health care services for people who are uninsured, isolated or medically vulnerable. The Bureau of Health Professions within HRSA increases access to health care by developing, distributing and retaining a diverse, culturally competent health workforce.

HRSA offers many scholarship, fellowship, and loan repayment opportunities for recent graduates, including the Faculty Loan Repayment Program for health professions graduates who agree to serve on the faculty of an accredited health profession college for two years (http://www.hrsa.gov/loanscholarships/repayment/Faculty/index.html); however, there are no research grants targeted to the early career researcher populations.

National Institute of Standards and Technology

The National Institute of Standards and Technology (NIST), an agency of the U.S. Department of Commerce (DOC), promotes U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology. NIST is organized into four laboratories: Material Measurement,

Physical Measurement, Engineering, and Information Technology. It also has a Center for Neutron Research and a Center for Nanoscale Science and Technology. NIST does not provide fellowships for early career faculty researchers based at academic institutions.

National Oceanic and Atmospheric Administration

The mission of National Oceanic and Atmospheric Administration (NOAA), a bureau of the Department of Commerce (DOC), is to understand and predict changes in Earth's environment and to conserve and manage coastal and marine resources. NOAA is organized according to line offices, including the National Weather Service, the National Ocean Service, and Office of Oceanic and Atmospheric Research, among others. NOAA does not provide any funding for early career faculty researchers to work at universities or non-profit research institutions.

Substance Abuse and Mental Health Services Administration

The Substance Abuse and Mental Health Services Administration (SAMHSA), within the Department of Health and Human Services (HHS), is the implementation arm for social and behavioral intervention and prevention strategies in public health. While much of SAMHSA's discretionary funds go to state and local governments or to support the health workforce, opportunities to implement SAMHSA initiatives for which nonprofit entities (such as universities) are eligible and occasionally offered.

There are no funding opportunities targeted specifically towards early career faculty researchers.

United States Agency for International Development

The United States Agency for International Development (USAID) is a mission agency responsible for implementing America's global development agenda. While USAID offers numerous fellowship opportunities, all involve doing policy work at agency headquarters in Washington or in one of its missions in a developing country. USAID does not maintain fellowship programs which support early career faculty to carry out research at their home institution. USAID's Bureau of Global Health administers a Global Health Fellowship Program which allows for two years of experience working directly in global health policy. Appointments are made both in USAID headquarters and in developing country missions throughout the world. More information on the program is at http://www.ghfp.net/content.fsp?id=40815.

U.S. Geological Survey

The U.S. Geological Survey (USGS) is the scientific research arm of the Department of the Interior (DOI). USGS's research portfolio is primarily intramural with limited extramural research opportunities for academic researchers and the private sector. USGS research is focused on supporting the mission of DOI and includes work in areas such as earthquake physics, water resources, climate change and adaption, mapping and geospatial collection, and minerals and energy resources. USGS currently does not offer funding for early career faculty researchers.