

## Choosing the Appropriate Funding Instrument and Funding Mechanism for Extramural Research Support

- NIH uses 3 major funding **instruments** to support extramural research:
  - **Grant:** Investigator decides the research to be designed or developed and the approach.
  - **Contract:** Government decides the research to fill their perceived need and establishes detailed requirements.
  - **Cooperative Agreement:** Similar to grants, but awarding Institute/Center (IC) and recipient have substantial involvement in carrying out the project's activities.

### NIH extramural research awards: Funding Instruments

- ~84 - 88% Grants (includes RFAs and PAs)
- ~ 8 -10% R&D Contracts
- ~ 4 - 6% Cooperative Agreements (all are RFAs and PAs)

- NIH uses 4 different funding **avenues** to support extramural research:
  - **Investigator-Initiated Research. Unsolicited:** The investigator initiates the research and submits a grant application within an area that is relevant to the NIH. Most applications for NIH support are unsolicited.
  - **Program Announcement (PA). Solicited:** NIH solicits grant applications or cooperative agreements in a given research area representing a new, ongoing or expanded interest and/or high-priority program; Generally, no set-aside of funds, and applications submitted in response are often considered investigator-initiated in that the applicant has responsibility for the planning, direction, and execution of the proposed project.
  - **Request for Applications (RFA). Solicited:** NIH solicits research grant applications for a one-time competition on a specific topic, Describes an IC initiative in a well-defined scientific area to stimulate research in a priority area; Set-aside of funds for a certain number of awards.
  - **Request for Proposals (RFP). Solicited:** NIH solicits offerors to submit research proposals for a one-time competition on a specific IC topic; Set-aside of funds for a certain number of awards.

RFAs (grants/cooperative agreements) and RFPs (contracts) tend to be used more in problem-oriented research efforts, such as disease-specific programs, especially in their beginning stages (for example, in the early years of the War on Cancer and of research on AIDS and Alzheimer's disease).

### Allocations of R01 Research Grants (FY 2003)

- ~82% of the awards were allocated to investigator-initiated research grants
- ~10% of the awards were allocated in response to PAs
- ~ 8% of the awards were allocated in response to RFAs

- NIH uses **numerous grant activities** (e.g., R01, R03, R21, R43) to support **unsolicited and solicited (RFA or PA) research**. (See Table1 below).

**Table 1. Major Grant Activities NIH Uses to Fund Extramural Research**

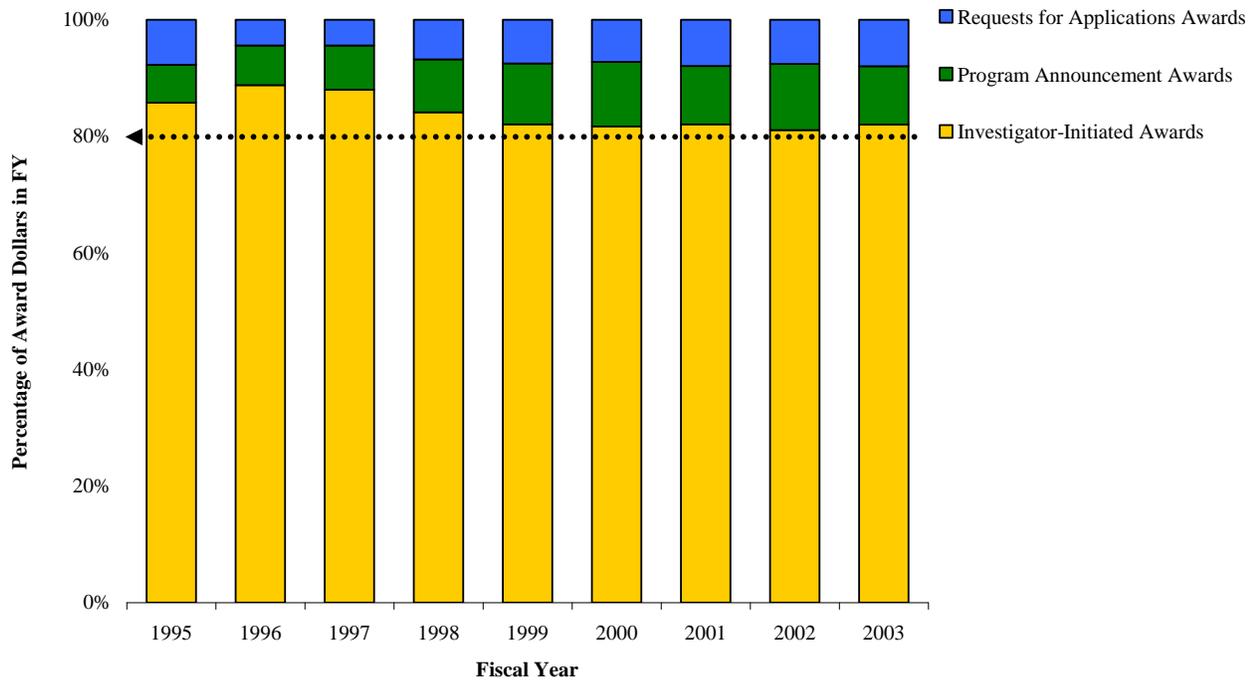
Activity	Description
<b>Research Grants</b>	
<b>Traditional Research Project Grant (R01)</b>	<b>Research Project Grants</b> are awarded to eligible institutions on behalf of a principal investigator to support a discrete project related to the investigator's area of interest and competence. These grants make up the largest category of NIH funding.
<b>Small Research Grant (R03)</b> <a href="http://grants.nih.gov/grants/funding/r03.htm">http://grants.nih.gov/grants/funding/r03.htm</a>	<b>Small Research Grants</b> support small research projects that can be carried out in a short period of time with limited resources for projects such as pilot or feasibility studies; secondary analysis of existing data; development of research methodology and/or technology. Not all ICs accept R03 applications.
<b>Academic Research Enhancement Award (AREA) (R15)</b> <a href="http://grants.nih.gov/grants/funding/area.htm">http://grants.nih.gov/grants/funding/area.htm</a>	<b>Academic Research Enhancement Awards</b> provide support to scientists at eligible domestic institutions for small-scale health-related research projects, such as pilot research projects and feasibility studies; development, testing, and refinement of research techniques; and similar discrete research projects that demonstrate research capability. Award is directed toward those smaller public and private colleges and universities that provide undergraduate training for a significant number of the U.S. research scientists.
<b>Exploratory/Developmental Research Grant (R21/R33)</b> <a href="http://grants.nih.gov/grants/funding/r21.htm">http://grants.nih.gov/grants/funding/r21.htm</a>	<b>Exploratory/Developmental Research Grants</b> seek to broaden the base of inquiry in fundamental biomedical research by encouraging applications for research projects that involve an especially high degree of innovation and novelty. NIH provides pilot-scale support for potentially ground-breaking ideas and methods that meet the following criteria: they lack sufficient preliminary data for feasibility to be established, their successful demonstration would have a major impact on biomedical research, and they fall within the areas supported by the awarding I/C. Not all ICs accept R21/R33 applications.
<b>Small Business Innovation Research Grant (SBIR: R43/R44)</b> <b>Small Business Technology Transfer Grant (STTR: R41/R42)</b> <a href="http://grants.nih.gov/grants/funding/sbir.htm">http://grants.nih.gov/grants/funding/sbir.htm</a>	<b>SBIR and STTR grants</b> are made to eligible domestic for-profit small business concerns conducting innovative research that has the potential for commercialization.
<b>Program Project Grant (P01)</b>	<b>Program Project Grants</b> are more complex in scope and budget than the individual basic research (R01) grant. While R01s are awarded to support the work of one principal investigator who, with supporting staff, is addressing a scientific problem, program project grants are available to a group of several investigators with differing areas of expertise who wish to collaborate in research by pooling their talents and resources. Program project grants represent synergistic research programs that are designed to achieve results not attainable by investigators working independently. Not all ICs accept P01 applications.
<b>Research Center Grant (P50/P60)</b>	<b>Research Center Grants</b> serve varying scientific and IC-specific purposes, but they have elements in common. The grants are multidisciplinary in scope and may focus more on an area or discipline of science than on a specific theme or goal. Independent investigators direct the projects and cores. Center grants offer a greater opportunity for scientific interactions and overall progress than with individually-funded projects. Not all ICs accept P50/P60 applications.
<b>Scientific Meeting Support (R13)</b> <a href="http://grants.nih.gov/grants/funding/r13/index.htm">http://grants.nih.gov/grants/funding/r13/index.htm</a>	NIH provides support for scientific meetings, conferences, and workshops that are relevant to its scientific mission. Any U.S. institution or organization, including an established scientific or professional society, is eligible to apply.

Table 2 below represents an integration of extramural research funding avenues, instruments and mechanisms.

<b>Table 2. Funding Avenues, Instruments and Activities for Extramural Research</b>			
<b>Funding Avenues</b>	<b>Funding Instrument</b>	<b>Research Activity (Examples)</b>	<b>Features</b>
<b>Investigator-initiated Research</b>  (Unsolicited)	<b>Grant</b>	<b>R01, R21, etc.</b>	<ul style="list-style-type: none"> <li>▪ Principal investigator (PI) initiates an application</li> <li>▪ PI submits application on any topic of his or her choosing.</li> </ul>
<b>Program Announcement (PA)</b>  (Solicited)	<b>Grant</b>  or  <b>Cooperative Agreement</b>	<b>R01, R03, R21, R43, etc.</b>  <b>U01</b>  <b>Specified in PA</b>	<ul style="list-style-type: none"> <li>▪ Describes through a formal statement a new, ongoing or expanded interest and/or high-priority program</li> <li>▪ NIH invites grant applications or cooperative agreement in a given research area</li> <li>▪ Generally active for three years</li> <li>▪ Generally no set-aside of funds</li> <li>▪ Applicant has responsibility for planning, direction, and execution of proposed project.</li> <li>▪ Applications reviewed in CSR with unsolicited applications</li> </ul>
<b>Requests for Applications (RFA)</b>  (Solicited)	<b>Grant</b>  or  <b>Cooperative Agreement</b>	<b>R01, R03, R21, R43, etc.</b>  <b>U01, U43</b>  <b>Specified in RFA</b>	<ul style="list-style-type: none"> <li>▪ NIH solicits research grant applications for a one-time competition on a specific topic</li> <li>▪ Describes an IC initiative in a well-defined scientific area to stimulate research in a priority area.</li> <li>▪ Set-aside of funds for a certain number of awards</li> <li>▪ Applications generally reviewed within the issuing IC</li> </ul>
<b>Requests for Proposals (RFP)</b>  (Solicited)	<b>Contract Mechanism</b>	<b>N01, N43</b>  <b>Specified in RFP</b>	<ul style="list-style-type: none"> <li>▪ Describes an IC initiative in a well-defined scientific area</li> <li>▪ NIH solicits offerors to submit research proposals for a one-time competition on a specific topic</li> <li>▪ Set-aside of funds for a certain number of awards</li> <li>▪ Applications generally reviewed within the IC that issued the RFP</li> </ul>

The chart and Table 3 below illustrate the percentage of awards that were allocated to investigator-initiated (unsolicited) grant applications, PA and RFAs between 1995 and 2003. For all years, the majority (80%) of the awards resulted from investigator-initiated research.

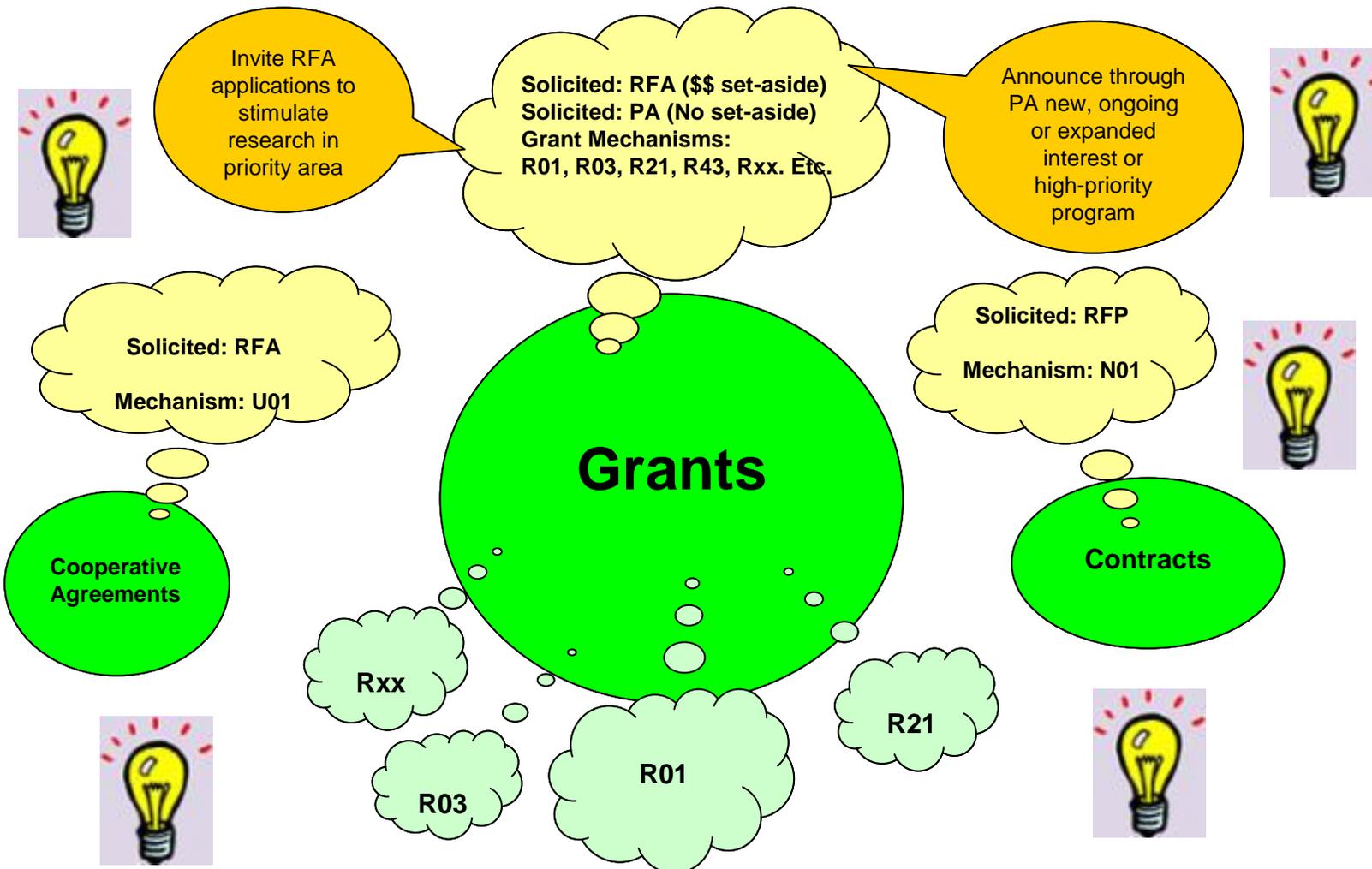
**Percentage of R01 and R29 Awards Allocated to Investigator-Initiated Applications,  
Program Announcements, and Requests for Application,  
FY 1995 to FY 2003**



**Table 3. NIH Competing Research Project Award - R01 and R29 Only  
By Source of Application (PA, RFA, Unsolicited)**

Source: Success rate files Program rfa\_source\_040416\_rfm

FY	Number	Amount	Source of Applications					
			Program Ann (PA)		Requests for Appn (RFA)		Unsolicited	
			Number	Amount	Number	Amount	Number	Amount
1995	5,618	\$1,205,355,600	323	\$78,091,124	408	\$93,422,531	4,887	\$1,033,841,945
1996	5,550	\$1,255,703,372	344	\$85,201,746	223	\$55,708,252	4,983	\$1,114,793,374
1997	5,994	\$1,400,742,175	424	\$106,531,792	242	\$61,696,600	5,328	\$1,232,513,783
1998	6,037	\$1,505,512,981	522	\$136,538,439	335	\$102,587,288	5,180	\$1,266,387,254
1999	6,860	\$1,927,579,121	689	\$201,480,565	450	\$144,604,765	5,721	\$1,581,493,791
2000	6,884	\$2,100,836,524	713	\$232,671,974	458	\$151,934,456	5,713	\$1,716,230,094
2001	6,818	\$2,235,420,697	635	\$223,429,093	497	\$177,423,962	5,686	\$1,834,567,642
2002	6,661	\$2,280,111,469	662	\$258,640,523	503	\$172,895,502	5,496	\$1,848,575,444
2003	7,255	\$2,517,169,505	654	\$251,611,358	589	\$200,817,196	6,012	\$2,064,740,951
1995	100.0%	100.0%	5.7%	6.5%	7.3%	7.8%	87.0%	85.8%
1996	100.0%	100.0%	6.2%	6.8%	4.0%	4.4%	89.8%	88.8%
1997	100.0%	100.0%	7.1%	7.6%	4.0%	4.4%	88.9%	88.0%
1998	100.0%	100.0%	8.6%	9.1%	5.5%	6.8%	85.8%	84.1%
1999	100.0%	100.0%	10.0%	10.5%	6.6%	7.5%	83.4%	82.0%
2000	100.0%	100.0%	10.4%	11.1%	6.7%	7.2%	83.0%	81.7%
2001	100.0%	100.0%	9.3%	10.0%	7.3%	7.9%	83.4%	82.1%
2002	100.0%	100.0%	9.9%	11.3%	7.6%	7.6%	82.5%	81.1%
2003	100.0%	100.0%	9.0%	10.0%	8.1%	8.0%	82.9%	82.0%



# UNSOLICITED

Investigator-initiated Research  
*"Cornerstone of NIH Research Portfolio"*

