

Advice on NIH SBIR & STTR Grant Applications – Choices & FY2006 Data



Gregory Milman
National Institute of Allergy
and Infectious Diseases

gmilman@niaid.nih.gov

May 2007

Hello, I am Gregory Milman. In this presentation I provide FY2006 data that may help you make some difficult choices for your NIH SBIR or STTR application. This presentation was updated in May 2007. Send your comments, suggestions, and criticisms to gmilman@niaid.nih.gov.

Choices To Consider



- Which institute or center (IC)?
- Which receipt date?
- SBIR or STTR?
- Program announcement or unsolicited?
- Normal or fast-track?
- Requested budget (normal or outside guidelines)?
- Should you revise your application?

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The following are some of the choices you should consider.

- How do you select which institute or center, that is IC, to target?
- Which of the three receipt dates is best?
- Are you more likely to be successful with an SBIR or STTR?
- Should you look for a relevant program announcement?
- Should you submit a fast-track application?
- How much money should you request?
- Should you revise your unfunded application?

Interpreting Statistical Data



- Data from FY2006 may help you plan your strategy.
- Like the stock market, FY2006's performance is no guarantee that the future will be the same.
- Be careful how you use this information.

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I will share with you FY2006 data that may help you plan your SBIR or STTR application strategy.

Like the stock market, one year's performance is no guarantee that another year's will be the same.

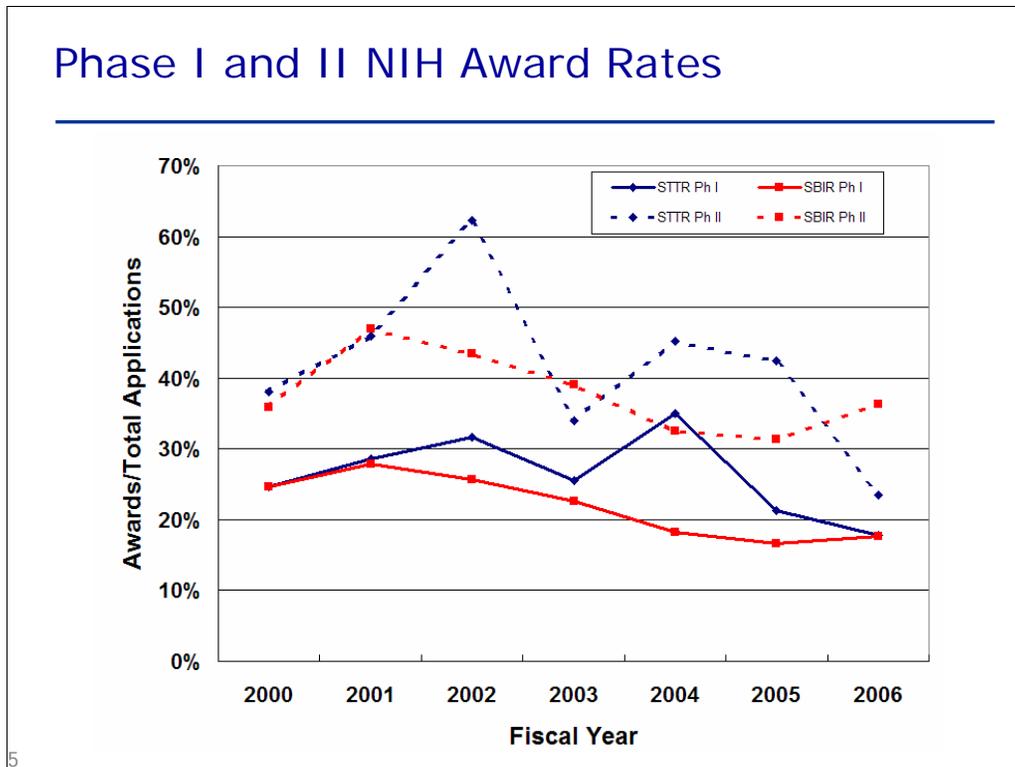
Be careful how you use this information. Ask NIH staff to describe changes, if any, between FY2006 and today.

NIH Awarding Institutes and Centers

<u>Acronym</u>	<u>Code</u>	<u>Name</u>
NCI	CA	National Cancer Institute
NCCAM	AT	National Center for Complementary and Alternative Medicine
NCRR	RR	National Center for Research Resources
NCMHD	MD	National Center on Minority Health and Health Disparities
NEI	EY	National Eye Institute
NHLBI	HL	National Heart, Lung, and Blood Institute
NHGRI	HG	National Human Genome Research Institute
NIAID	AI	National Institute of Allergy and Infectious Diseases
NIAMS	AR	National Institute of Arthritis and Musculoskeletal and Skin Diseases
NIBIB	EB	National Institute of Biomedical Imaging and Bioengineering
NICHD	HD	National Institute of Child Health and Human Development
NIDCR	DE	National Institute of Dental and Craniofacial Research
NIDDK	DK	National Institute of Diabetes and Digestive and Kidney Diseases
NIEHS	ES	National Institute of Environmental Health Sciences
NIGMS	GM	National Institute of General Medical Sciences
NIMH	MH	National Institute of Mental Health
NINDS	NS	National Institute of Neurological Disorders and Stroke
NINR	NR	National Institute of Nursing Research
NIA	AG	National Institute on Aging
NIAAA	AA	National Institute on Alcohol Abuse and Alcoholism
NIDCD	DC	National Institute on Deafness and Other Communication Disorders
NIDA	DA	National Institute on Drug Abuse
NLM	LM	National Library of Medicine

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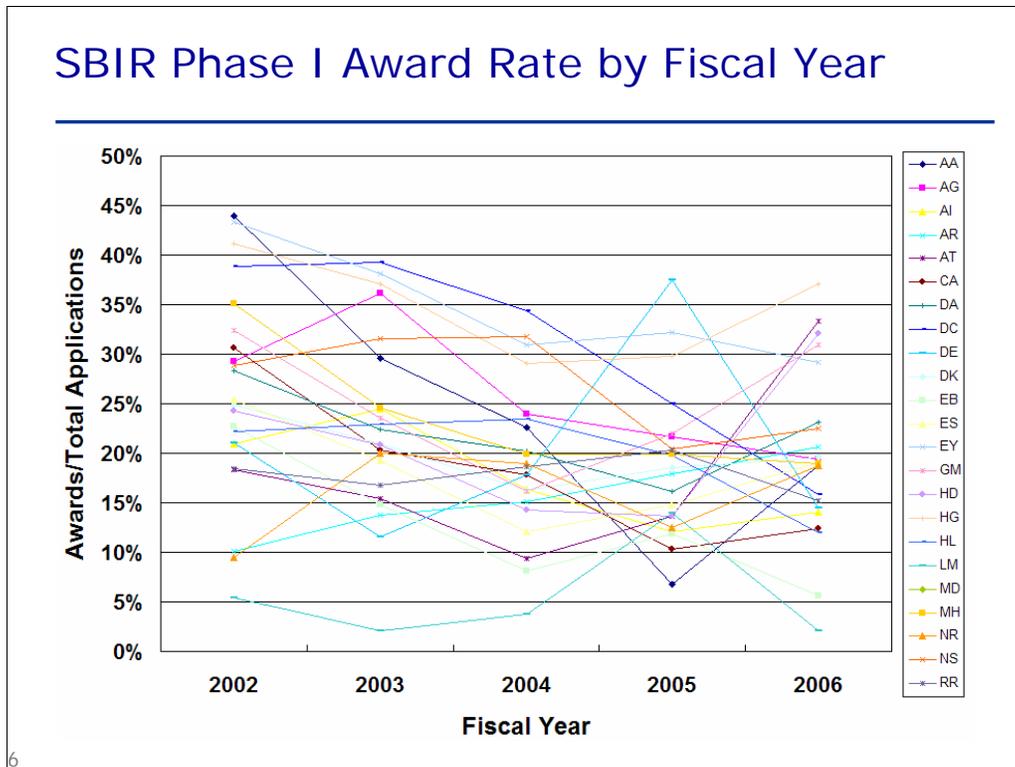
This slide lists the acronyms, two letter grant codes, and names of the twenty-three NIH Institutes and Centers that award grants. Each name is a link to the IC's web.



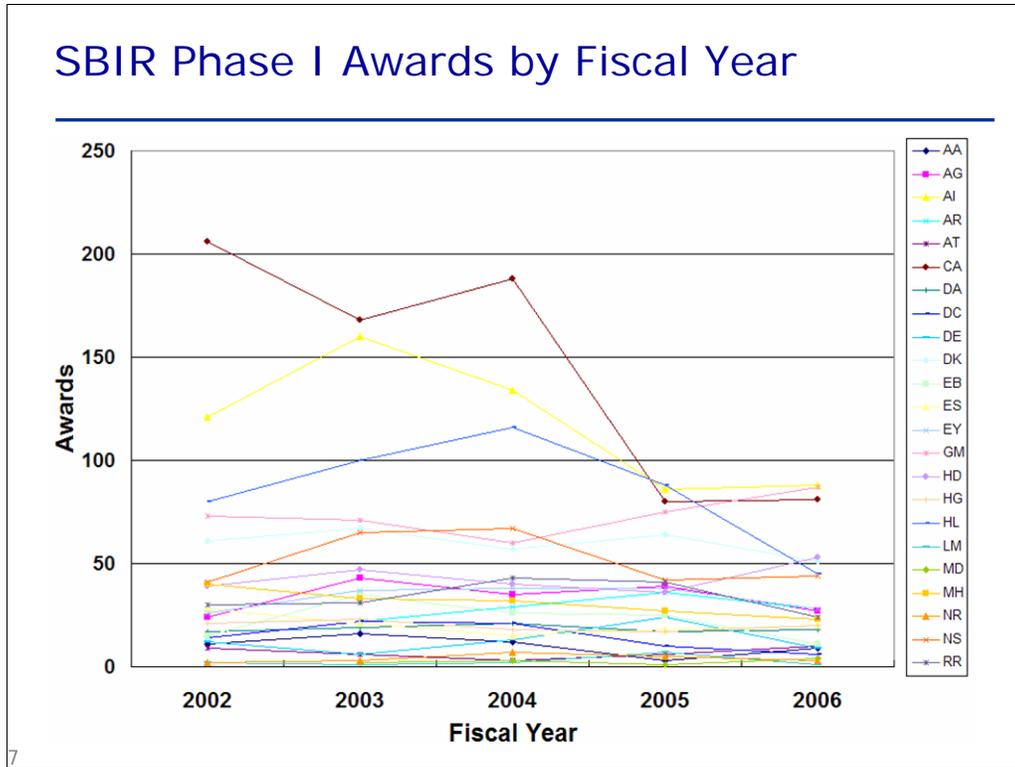
This slide provides summary data for all NIH ICs in fiscal years 2002 to 2006 for SBIR and STTR applications, and for both Phase I and Phase II. I define an award rate as the percentage of total applications received that are awarded grants. An award rate is easy to calculate and its value differs only slightly from the success rate defined by NIH.

In 2004, there was an STTR award rate peak that resulted from an increase from 0.15% to 0.3% in the mandated STTR set aside funds. Except for this peak, NIH award rates have decreased from 2002 to 2006 for three reasons:

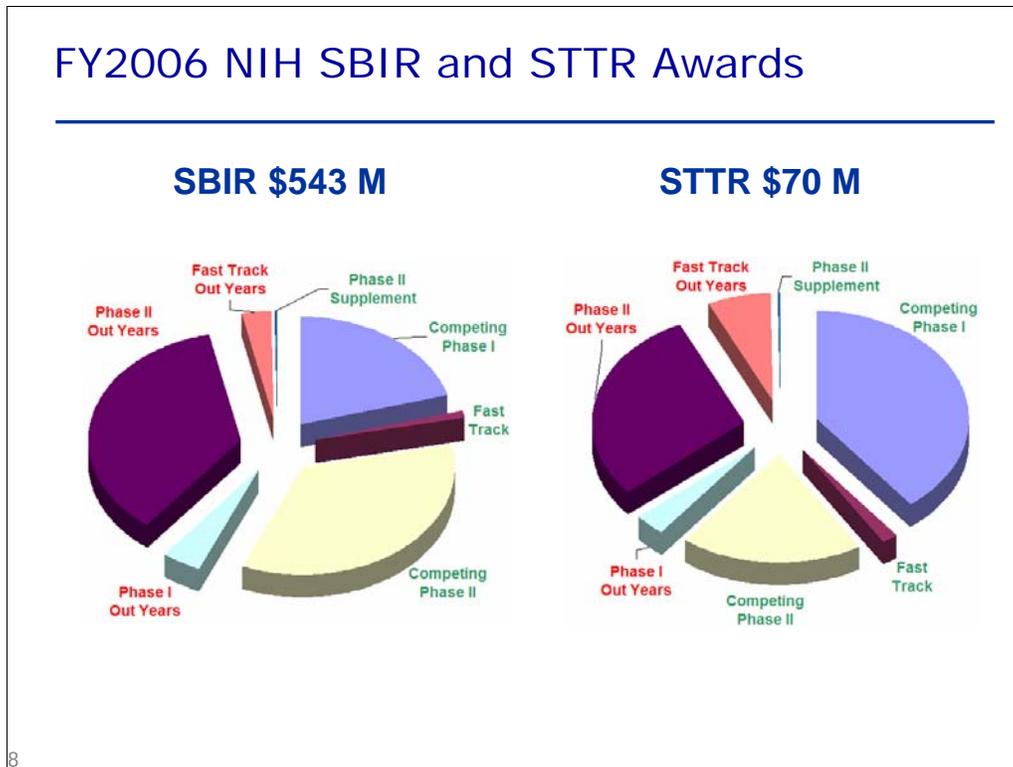
1. The doubling of the NIH budget from fiscal year 1999 through 2003 ended and ICs received inflation or less increases.
2. Phase I awards in 2003 progressed into Phase II awards using more of the mandated funds.
3. ICs began using more of the mandated funds on Phase I and Phase II awards for longer than normal times and for more than normal amounts.



This slide shows each IC's award rate for SBIR Phase I applications. The award rates of individual ICs differ from the summary data for all NIH ICs on the previous slide. From 2002 to 2006, the award rates for some ICs go up, others go down, and some go both up and down or vice versa. The results are similar for STTR award rates. I conclude that you cannot predict an IC's current award rate based on award rates in previous years. Therefore, I suggest you do not target your application to a specific IC based on historical data.

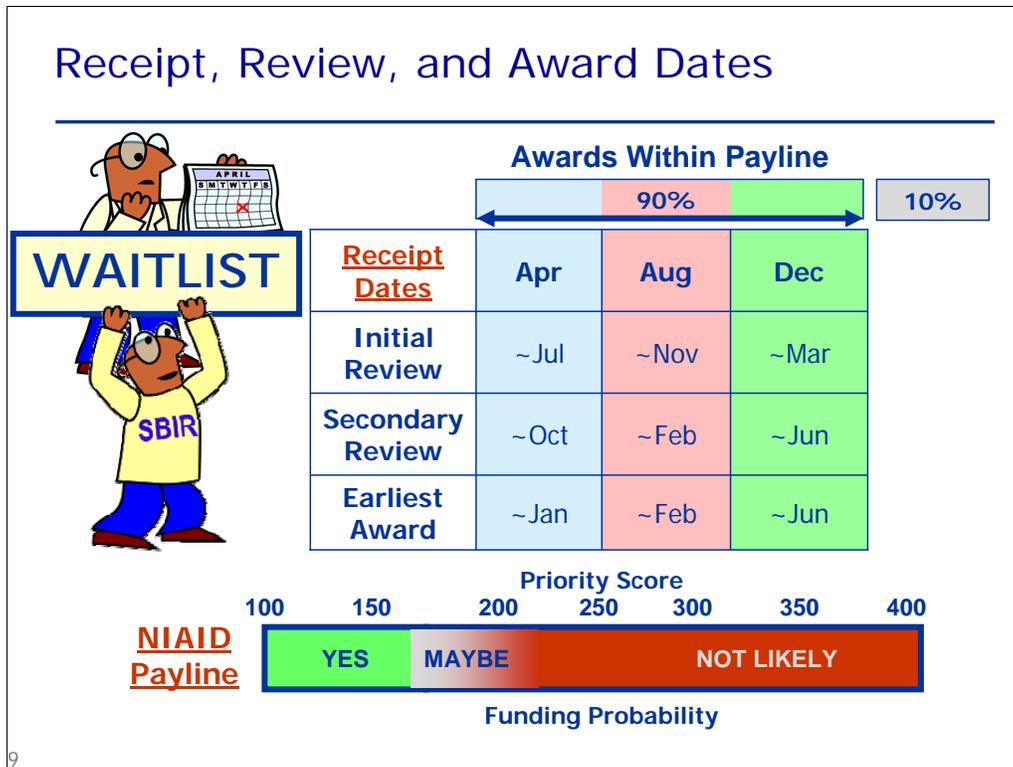


This slide shows the number of SBIR Phase I awards for each IC in fiscal years 2002 to 2006. Over this period, the number of Phase I awards made by some of the larger ICs decreased significantly leading to an overall decline in the NIH award rate. However, as shown in the previous slide, a historical trend to fewer awards and lower award rates is not true for all ICs. The next slide provides an explanation for the variability among ICs.



This slide summarizes how NIH spent SBIR and STTR funds in FY2006. Approximately 44% of SBIR and 40% of STTR funds went to non competing "out years" of Phase I and Phase II grants (shown in red type). Approximately 21% of SBIR funds and 40% of STTR funds paid competing Phase I awards with the remainder going to competing Phase II awards. Each individual IC may have a higher or lower percentage of mandated funds in each category which will affect both the IC's number of awards and award rate.

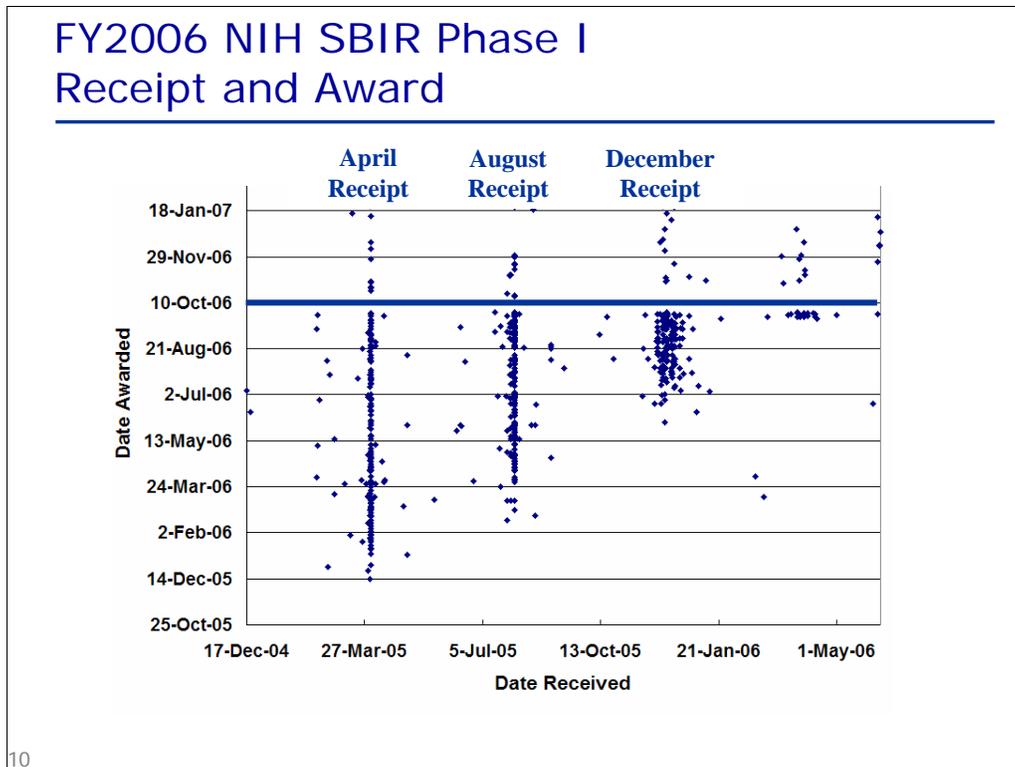
Funds available for competing awards are shown in green type. A small increase in the number of Phase II awards can significantly decrease the number of Phase I awards because Phase II awards have much larger budgets. Fewer Phase I awards mean potentially fewer competing Phase II awards in following years. With fewer competing Phase II awards in those years, there will be a corresponding increase in the number of Phase I awards. As a result, the relative number of Phase I and Phase II awards fluctuates from year to year. Compounding this analysis, the number of competitive applications that each IC receives varies from year to year. As a result, the award rates for ICs vary from year to year in an unpredictable way. Furthermore, variability in STTR funding is likely to be greater than for SBIR funding because mandated STTR funds are less.



The Receipt Dates link takes you to the official NIH information on receipt, review, and award dates. The receipt date for AIDS applications are about one month later than indicated. The award dates in this table differ somewhat from the official table because they are based on the actual FY2006 data shown in the next slide. NIH operates on a fiscal year that begins October 1st and ends September 30th. Applications received in April are the first to be funded the following fiscal year. Because the NIH budget is often delayed in Congress, funding of applications received in April is also often delayed.

Review committees assign scored applications a priority from 100 being the best to 500 being the worst. Based on historical data, the NIAID budget office sets a conservative "payline" around 170, and we fund applications with scores up to the payline. A conservative payline ensures that applications received later in the fiscal year do not go unfunded because we spent our funds on poorer scoring applications. The Payline link takes you to public NIAID paylines for all types of grants. Other ICs may not use paylines or may not make their paylines public.

Think of applications above but close to the payline as being on a "waitlist" – they may or may not be funded. Suppose NIAID spends about 90% of its funds on all the applications with scores up to the payline. At the end of the fiscal year, we use the remaining 10% funds to offer awards to the best applications on the waitlist. As a result, if you receive a score under the payline and we have a budget, you are likely to be funded without delay. If you receive a score over 220, you are not likely to be funded at all. Finally, if you are on the waitlist you probably will have to wait until August or September to learn if your application will be funded.



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All NIH FY2006 SBIR Phase I awards are shown on this slide. Each dot represents a single award. A dot's location on the x-axis is the date the application was received and its location on the y-axis is the date that an award was issued. Most of the applications were received on or close to the April, August, and December receipt dates shown at the top of the graph. AIDS applications are the dots located about a month to the right of normal receipt dates. A horizontal dark line marks the end of the 2006 fiscal year.

NIH makes few awards for April receipt date applications before January. The delay in funding occurs because NIH usually does not receive its fiscal appropriation until January or later, and by then there is a backlog of all types of applications awaiting funding. As you can see on the graph, April SBIR applications continued to be awarded at a fairly constant rate through the end of the fiscal year. As a result, some April SBIR applications waited up to 17 months before receiving an award.

Awards for August and December receipt date applications began about seven months following receipt and continued through the end of the fiscal year. Applications for the December receipt date waited the least time between receipt and award.

The April receipt date has some advantages over later dates even though you may wait longer to receive an award. First, if your application requires revision, you will know early enough to revise it for the August or December receipt dates, giving you a second chance at funding in the same fiscal year and at the same payline.

Second, NIH has a number of eligibility requirements that are only examined immediately before an award. Otherwise fundable applications deficient in any of these requirements have till the end of the fiscal year to become eligible. When you submit in August or December, you will have less time to meet these eligibility requirements before the end of the fiscal year and you risk not being funded.

Program Announcements



- Program announcements (PAs) are NIH staff "wish lists."
- Review committees usually evaluate an application responding to a PA no differently than any other application.
- You can handicap your application by trying to make it fit a PA.
- Respond to a PA only if the research you want to propose exactly matches the PA request.
- You do not need to respond to a PA to request an award over \$100,000.
- Most, but not all FY2005 multi-year awards went to applications in response to PAs.

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Program Announcements, that is PAs, are written by NIH extramural program staff to encourage grant applications that will fill gaps in their portfolios.

Reviewers evaluate an application based on its science and may not even read the PA to which an application responds.

You may handicap your application if you try to "fit a square peg into a round hole."

I suggest you respond to a PA if and only if the research you want supported exactly matches the PA request.

Applicants are attracted to a PA that states they may request over \$100,000 a year and multi-year funding. You do not need to respond to a PA to request over \$100,000. All ICs will award over \$100,000 a year if the request is well justified and approved by the review committee. I show you the amount of award for all FY2006 Phase I applications in a following slide.

Most, but not all FY2006 multi-year awards went to applications in response to PAs. This could be because few other applicants requested longer time. If you need to apply for a two- or three-year Phase I grant, check first with the appropriate IC staff to learn if your application would be accepted.

FY2006 Phase I Applications



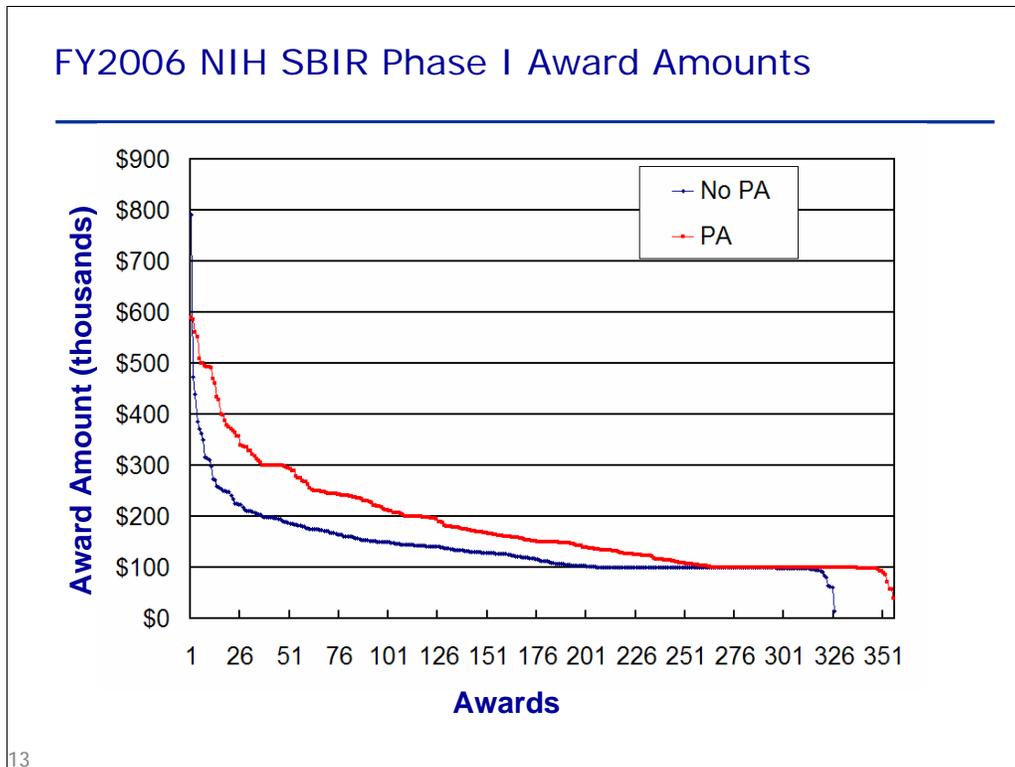
Type	Received	Funded	Award Rate
SBIR	3891	682	17.5%
No PA	1995	326	16.3%
PA	1896	356	18.8%
STTR	867	153	17.6%
No PA	441	80	18.1%
PA	426	73	17.1%
FAST TRACK			
SBIR	205	35 (28PA)	17.1%
STTR	43	10 (8PA)	23.3%

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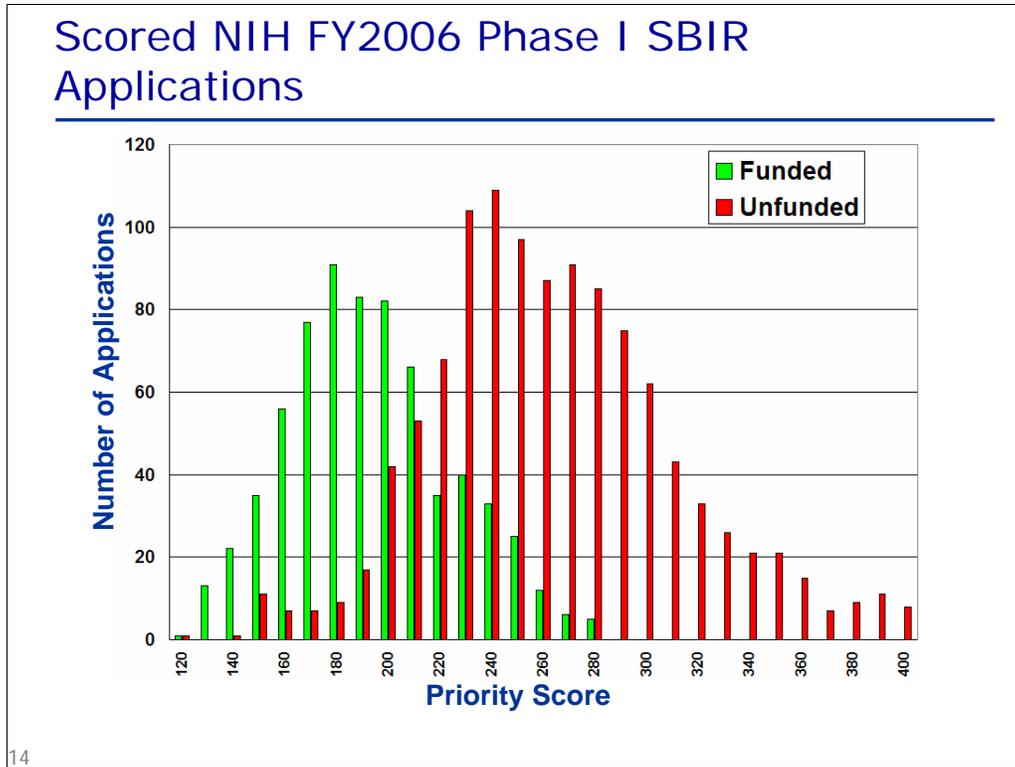
The upper part of this table shows the number of FY2006 NIH Phase I SBIR applications received and funded and the award rate for applications either responding or not responding to a program announcement.

The middle section of this table shows data for FY2006 STTR applications. There does not seem to be a significant difference in the award rate between applications responding or not responding to a PA.

The lower part of this table shows the data for fast-track applications. The award rate for fast-track applications was about the same as that for Phase I applications. Most of the awarded fast-track grants were those responding to PAs.



All 682 FY2006 new NIH SBIR Phase I grants are arranged by descending amount of award on the y-axis. Each of the 356 red dots is an award to an application in response to a PA, and each of the 326 blue dots is an award to an application not in response to a PA. Note that about half of the 326 SBIR Phase I award recipients not responding to a PA received more than the “normal” \$100,000 award.



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The green bars in this chart show the number of scored FY2006 NIH Phase I SBIR applications that were funded within each 10-point priority score range.

The red bars show applications that were not funded. Not shown on this chart are approximately an equal number of applications that were both unscored and unfunded.

About 87% of applications that had priority scores under 200 were funded. The unfunded applications with outstanding scores may have had eligibility or just-in-time issues that prevented funding.

Revised FY2006 Phase I Applications Try, Try, Again!



Type	Received	Funded	Award Rate
SBIR All	3891	682	17.5%
Initial	2788	409	14.7%
1st revision	888	200	22.5%
2nd revision	215	73	34.0%
STTR All	867	153	17.6%
Initial	652	98	15.0%
1st revision	182	46	25.3%
2nd revision	33	10	30.3%

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This table illustrates that revised applications have a higher probability of funding than initial applications.

The overall award rate for FY2006 SBIR applications was 17.5%, while that for initial applications was 14.7%, increasing to 22.5% and 34% respectively for first and second revisions. Only about a third of unsuccessful applications were revised once, and only about a third of unsuccessful revised applications were revised a second time.

The overall award rate for FY2006 STTR applications was 17.6%, while that for initial applications was 15%, increasing to 25.3% and 30.3% respectively for the first and second revisions. Only about a third of unsuccessful applications were revised once, and only about a quarter of unsuccessful revised applications were revised a second time.

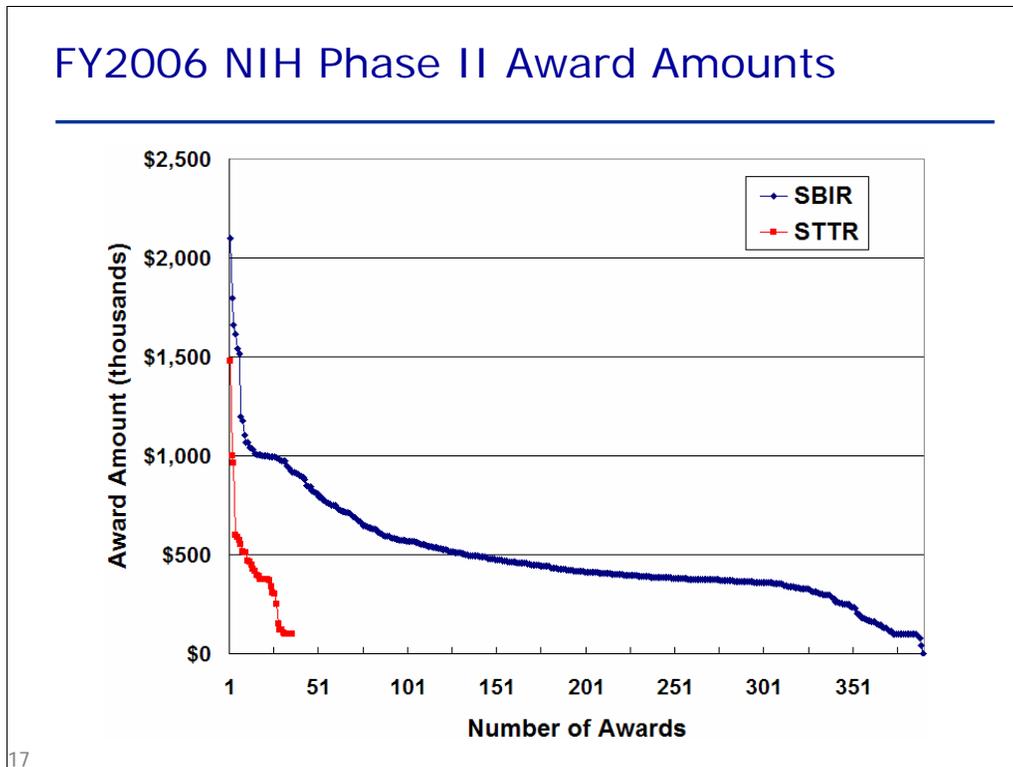
NIH Phase II Applications



Type	Received	Funded	Award Rate
SBIR FY2004	882	285	32.3%
STTR FY2004	71	30	42.3%
SBIR FY2005	955	295	30.9%
STTR FY2005	76	31	40.8%
SBIR FY2006	946	344	36.4%
STTR FY2006	113	26	23.0%

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This table shows the number of Phase II SBIR and STTR applications received and funded, and the award rate for each application type for fiscal years 2004, 2005, and 2006. Note that the award rate for Phase II applications is considerably higher than that for Phase I applications.



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This graph shows the annual award amount for all funded FY2006 Phase II SBIR and STTR grants, including both competing and continuing awards. The annual award amount is on the y-axis and each dot on the x-axis is an individual grant. Each of the 36 red dots is an STTR award and each of the 390 blue dots is an SBIR award. About two-thirds of all grantees received Phase II awards in excess of the “normal” annual amount of \$375,000. The median annual Phase II SBIR award was \$416,000 and the median annual Phase II STTR award was \$375,000. About half of the Phase II awards were in response to a PA. Funded applications in response to a PA had only a slightly higher median award amount compared to those not responding to a PA.

More Presentations



TOPICS

- Basics
- Choices and FY2006 Data
- Grantsmanship
- Electronic Application
- NIH Timeline

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Thank you for watching this presentation. Close this window to select another topic.