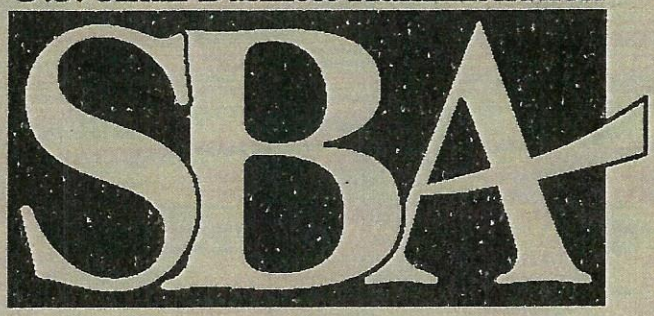
U.S. Small Business Administration



SMALL BUSINESS INNOVATION RESEARCH PROGRAM (SBIR)

ANNUAL REPORT – FY 1999

Office of Technology
U.S. Small Business Administration

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OVERVIEW

The Small Business Innovation Development Act of 1982, Public Law 97-219, directs the U.S. Small Business Administration (SBA) to establish policy for monitoring, evaluating, and reporting on accomplishments of the Small Business Innovation Research (SBIR) program. This is the 17th annual report on the SBIR program, which summarizes program activities and results for FY 1999.

Public Law 97-219 was signed on July 22, 1982. Congress reauthorized the SBIR program in 1986, and again in 1993, extending it to October 1, 2000. This reauthorization also mandated an increase in the percentage of research and development (R&D) funds that participating Federal agencies must direct to small businesses under the program from 2 percent to 2.5 percent.

In contemplating the program's reauthorization of 1993, Congress concluded that technological innovation creates jobs, increases productivity and economic growth, and serves as a counter force to inflation and the Nation's balance-of-payments deficit. Congress also found that while the small business sector is the Nation's principal source of significant innovation, large businesses, universities and government laboratories historically have conducted the vast majority of federally funded R&D.

In FY 1999, the SBIR program continued to demonstrate that with focused program support from the Federal Government, small high-tech firms could convert basic ideas and research into commercial products. In doing so, these firms increase national productivity, and contribute to American leadership in the competitive international marketplace. This partnership between the Government and private sector has proved to be remarkably effective.

Over a 17-year period, Federal agencies participating in the SBIR program have awarded more than 50,000 awards worth over $9.5 billion to thousands of small high-tech companies. The innovative small businesses that have received awards have applied their ingenuity and inventiveness to fulfilling Federal R&D requirements and to creating profitable commercial products. These products encompass a wide range of industries and technologies, from the familiar to the exotic.

SBIR program highlights since FY 1983 include the following:

- Successful commercial sales arising from SBIR awards come from an ever-broadening range of technologies and industries such as laser manufacture, medical research, robotics and military decision-making.

- New products and techniques emerging from SBIR awards support America's competitiveness worldwide, and improve the lives of people here and abroad.

- Surveys by SBA and the General Accounting Office indicate that at least 25 percent of SBIR award recipients have reported commercial success of SBIR-supported product(s) within 4 years of receiving a Phase II award.

- Small disadvantaged and women-owned businesses have received a significant portion of SBIR awards.

Despite their talent, determination and entrepreneurial spirit, many small high-tech businesses could not have commercialized their innovation without the unique support of this program. As the company profiles and

statistics in this report suggest, an increasing number of firms are succeeding in commercializing new products, processes and services derived from SBIR awards.

In administering and managing the SBIR program, SBA's Office of Technology encourages small high-tech companies to respond to solicitations from Federal agencies participating in the program. A number of small businesses continue to win multiple awards reflecting their persistent spirit of innovation.

INTRODUCTION

The Rationale

The rationale for enactment of Public Law 97-219 was to give small, innovative enterprises a greater role in federally-funded R&D. The goal was to develop the Nation's industrial technology base for creative technical achievement, and to expand markets for ideas developed by America's small high-tech businesses.

Public Law 97-219 recognized that small businesses -- especially technically oriented firms -- were responsible for most new products, processes and technologies. It also recognized that these firms were particularly adept at turning R&D activities into viable commercial products. In many cases, the only thing such small firms needed to succeed was financial assistance.

The SBIR program has yielded many small business successes. These successful businesses have created many new jobs, expanded the Nation's tax base, and bolstered America's economic viability and productivity.

Legislative Background

Public Law 97-219 requires that, beginning in FY 1983, each Federal agency having an extramural research and research and development (R/R&D) budget in excess of $100 million in FY 1982, or any year thereafter, set aside a portion of such requirements for competitive award under the SBIR program. Through a 4-year phase-in period, civilian agencies were required to increase the percentage of their R/R&D set-asides from 0.2 percent in FY 1983 to 1.25 percent in FY 1986. The Department of Defense was allowed 5 years to phase in its increase from 0.01 percent in FY 1983, to 1.25 percent in FY 1987.

The Small Business Research and Development Enhancement Act of 1992 (Public Law 102-564) extended the SBIR program to October 1, 2000. It also incrementally increased the percentage of annual extramural R/R&D funds that participating Federal agencies must direct to small high-tech firms from 1.25 percent to 2.5 percent.

Public Law 102-564 also sought to:

- Expand and improve the SBIR program.
- Emphasize increased private-sector commercialization of technology developed under the program.
- Increase small business participation in Federal research and development.
- Improve dissemination of SBIR program information to encourage participation of women-owned and socially and economically disadvantaged small businesses.

Participating Federal Agencies

Pursuant to Public Law 97-219, the following Federal agencies are required to participate in the SBIR program:

- Department of Agriculture (DOA)
- Department of Commerce (DOC)
- Department of Defense (DOD)
- Department of Education (ED)
- Department of Health and Human Services (HHS)
- Department of Transportation (DOT)
- Environmental Protection Agency (EPA)
- National Aeronautics and Space Administration (NASA)
- Department of Energy (DOE)
- National Science Foundation (NSF)

SBIR Program Structure

The SBIR program is structured in three phases:

- Phase I: Awards up to $100,000 are for research projects designed to evaluate the feasibility, and the scientific and technical merit of an idea. Phase I awards are for a period of up to 6 months.

- Phase II: Phase I projects with the most potential are funded for further development of the proposed idea. Phase II funding of up to $750,000 may be awarded over a period of up to 2 years.

- Phase III: No SBIR funds may be used in this phase. Private-sector investment and support must be used to bring an innovation to market. However, as appropriate, Phase III funds may include follow-up contracts with Federal agencies for production of Phase II innovations.

SBA Authorities and Responsibilities

SBA has authority and responsibility to:

- Develop, coordinate, issue and update a policy directive for the Federal government-wide conduct of the SBIR and R/R&D Goaling Programs.

- Develop and administer an information and outreach program for the SBIR program.

- Develop and maintain a source and information file of interested small businesses.

- Develop, coordinate, publish and disseminate SBIR Pre-Solicitation Announcements.

- Survey, monitor and report on each agency's SBIR program.

- Report at least annually to Congress on each agency's SBIR program and on SBA's monitoring activities.

- Coordinate private-sector commercialization of SBIR innovations.

- Obtain information on the current National Critical Technologies.

Authorities and Responsibilities for Participating Agencies

Each participating agency has the authority and responsibility to:

- Determine the categories of projects to include in its SBIR program.

- Issue SBIR solicitations in accordance with a schedule determined cooperatively with the SBA.

- Unilaterally determine research topics within each SBIR solicitation, giving special consideration to broad research topics and to topics that further one or more National Critical Technologies.

- Receive and evaluate proposals resulting from SBIR solicitations.

- Select awardees for SBIR funding agreements.

- Ensure that funding agreements under the SBIR program include provisions setting forth the respective rights of the United States and small businesses with regard to intellectual property rights and follow-on research.

- Administer SBIR funding agreements (or delegate such administration to another agency).

- Make payments to SBIR award recipients based on progress toward or completion of the funding agreement requirements.

- Submit annual reports on the SBIR and R/R&D goaling programs to the SBA.

PROGRAM SERVICES

In setting SBIR program policy and in monitoring and evaluating the program, the SBA seeks to simplify and standardize grant and contract award procedures, minimize paperwork, and encourage small companies owned by women, minorities and disadvantaged individuals to participate in the program. The SBA also conducts an ongoing national information and outreach campaign, and ensures that participating agencies conform to SBIR policy directives.

The SBIR solicitation process minimizes administrative burden. It mandates timely receipt and review of proposals, peer review, and adherence to cost principles. Also, it establishes guidelines for proprietary-information, selection of awardees, data-rights retention, title to Government property, and cost sharing.

Pre-Solicitation Announcements

The SBA's SBIR Pre-Solicitation Announcement to small businesses presents basic program solicitation information in a succinct and understandable manner. Each quarterly announcement provides complete information on all SBIR activity for that quarter, eliminating the need for small businesses to track the activities of each participating agency individually. The announcements are available from the SBA's electronic bulletin board, SBA On-Line, and on the Internet. The announcements provide small businesses with--

- A brief statement of each research topic, listed by participating agency;
- The opening and closing dates of each solicitation;
- An estimate of the number of awards to be made under each solicitation;
- The party to contact for a copy of the agency's solicitation; and,
- A master schedule of solicitation opening and closing dates for all participating agencies.

Other SBIR information available from SBA includes award winners from the latest available fiscal year and the SBIR Proposal Preparation Handbook.

Outreach

SBA field representatives and public and private organizations play significant roles in dissemination of SBIR program information. During FY 1999, SBA worked with many organizations in conducting SBIR seminars and conferences, providing information, materials and speakers.

Another form of outreach involves briefing officials of foreign governments. During FY 1999, foreign interest in the SBIR program continued to grow. SBIR-type programs are in place in the United Kingdom and other European countries.

PROGRAM DATA

Reporting Requirements for SBIR

To monitor and report on the participating agencies' SBIR programs, SBA has established a reporting base to compare against each agency's budget data. To determine extramural obligations as a base for the size of each agency's SBIR program, Public Law 97-219 provides a definition of research and development.

It should be noted that a 3-year budget cycle is used for establishing extramural R/R&D obligations. Within any given year, a participating agency's initial estimate can change due to congressional action on that agency's R/R&D budget. To ensure proper implementation of the program, each agency establishes an estimated budget as a basis for operations during the year. The SBA uses a system of deficits and credits to make the necessary adjustments during the course of the budget cycle. In this way, SBA determines whether agencies comply with SBIR set-aside requirements.

FY 1999 Summary

There have been long-term upward trends in the number of Phase I, Phase II and total SBIR awards.

- In FY 1999, the 10 agencies participating in the SBIR program released a total of 13 Phase I solicitations. The Department of Health and Human Services, the Department of Defense and the Environmental Protection Agency each released two solicitations; the other seven agencies released one each.
- Participating agencies received 19,016 Phase I proposals from small high-tech enterprises. Agencies subsequently made 3,334 Phase I awards, representing 17.5 percent of proposals received.
- A total of 2,476 Phase II proposals were received by participating agencies, resulting in 1,256 awards. These awards represented 51 percent of Phase II proposals received.
- In total, 21,492 Phase I and Phase II proposals were received in FY 1999. Phase I and Phase II awards totaled 4,590, representing 21 percent of the total number of proposals received.

(See Program Data Chart)

SBIR Program Data

Fiscal Year 1999 SBIR Agency Obligations Summary (dollars in thousands)

	DOA	DOC	DOD	DOE	DOT	ED	EPA	HHS	NASA	NSF	TOTAL
Agency Extramural Budget	532,342	292,712	21,244,314	3,258,040	147,566	206,898	278,118	12,659,139	3,564,000	2,280,000	44,463,129
Agency SBIR Budget	13,308	7,318	541,310	81,451	3,689	5,290	6,953	316,478	91,000	59,280	1,126,077
Dollars Obligated	12,718	7,414	514,073	81,334	6,345	5,290	5,489	314,349	89,100	60,414	1,096,526
Percent of SBIR to Extramural Budget	2.20%	2.53%	2.42%	2.50%	4.30%	2.56%	1.97%	2.48%	2.50%	2.65%	2.47%
Deficit/Surplus	-590	96	-27,237	-117	2,656	0	-1,464	-2,129	-1,900	1,134	-29,551

Fiscal Year 1999 Award Profile (dollars in thousands)

	DOA	DOC	DOD	DOE	DOT	ED	EPA	HHS	NASA	NSF	TOTAL
Total Phase I Awards	84	40	1,393	202	17	40	47	927	344	240	3,334
Minority/Disadvantaged Phase I Awards	10	4	292	33	2	5	6	46	52	35	485
Total Phase II Awards	32	17	569	85	13	10	8	309	124	89	1,256
Minority/Disadvantaged Phase II Awards	2	3	105	12	1	0	1	8	16	19	167
Total Phase I Dollars Awarded ($)	5,183	2,837	117,098	20,067	1,691	1,990	3,273	99,920	23,950	23,523	299,532
Minority/Disadvantaged Phase I Dollars ($)	604	300	24,922	3,268	196	250	409	4,855	3,630	3,386	41,820
Total Phase II Dollars Awarded (Obligations)	7,535	4,587	396,975	61,267	4,654	3,300	2,216	214,429	65,150	36,891	797,004
Minority/Disadvantaged Phase II Dollars ($)	450	738	75,204	8,256	296	0	671	5,900	9,550	7,422	108,487
Average Amount for Phase I Awards ($)	62	71	84	99	99	50	70	108	70	98	90

Fiscal Year 1999 Agency Solicitation Profile

	DOA	DOC	DOD	DOE	DOT	ED	EPA	HHS	NASA	NSF	TOTAL
Number of Solicitations Released	1	1	2	1	1	1	2	2	1	1	13
Number of Research Topics in Solicitations	9	22	769	40	18	11	15	147	25	25	1,081
Number of Copies Distributed	10,000	3,000	36,000	2,500	250	1,600	10,000	1,886	25,000	20,000	110,236
Number of Phase I Proposals Received	420	338	8,687	1,135	159	208	532	3,570	2,335	1,632	19,016
Number of Phase II Proposals Received	56	44	936	179	21	34	30	680	312	184	2,476
Number of Phase I Awards	84	40	1,393	202	17	40	47	927	344	240	3,334
Number of Phase II Awards	32	17	569	85	13	10	8	309	124	89	1,256

Dollars obligated can include modifications to previous year's awards: DOD $60,133K and HHS $4,764 in non-SBIR funds

Table 2: Number of SBIR Awards -- FY 1983 through FY 1999

Fiscal Year	Phase I	Phase II	Totals
83	686	-	686
84	999	338 275	1,337
85	1,397	407 346	1,804
86	1,945	564 567	2,509
87	2,189	768 688	2,957
88	2,013	711 702	2,724
89	2,137	749 748	2,886
90	2,346	837 890	3,183
91	2,553	788 743	3,341
92	2,559	916 904	3,475
93	2,898	1,141 1035	4,039
94	3,102	928 930	4,030
95	3,085	1,263 1254	4,348
96	2,841	1,191 1186	4,032
97	3,371	1,404 1409	4,775
98	3,022	1,320 1283	4,342
99	3,334	1,256 1258	4,590
Total	40,477	14,581	55,058

There have been parallel long-term upward trends in the dollar value of Phase I, Phase II and total SBIR awards.

- During FY 1999, participating agencies awarded $1.1 billion through the SBIR program.
- FY 1999 Phase I awards totaled $299 million.
- Phase II awards aggregating $797 million were made in FY 1999.
- In FY 1999, minority/disadvantaged-owned firms received 652 awards totaling $150 million.

Please see Table 3. (Note: The overall total includes $60.1 million in modifications to non-FY 1999 awards and $4.8 million in non-SBIR funds. In awarding funding agreements under Phase II, agencies utilize various acquisition methods of obligation and funding. (For purposes of consistency, the acquisition data in this report reflect only actual obligations during FY 1999.)

Table 3: Value of SBIR Awards-- FY 1983 through FY 1999 (in millions of dollars)

Fiscal Year	Phase I	Phase II	Totals
83	$ 44.5	$	$ 44.5
84	48.0	60.4	108.4
85	69.1	130.0	199.1
86	98.5	199.4	297.9
87	109.6	240.9	350.5
88	101.9	248.9	389.1
89	107.7	321.7	431.9
90	118.1	341.8	460.7
91	127.9	335.9	483.1
92	127.9	371.2	508.4
93	154.0	490.7	698.0
94	220.4	473.6	717.6
95	232.2	601.9	834.5
96	228.9	645.8	916.3
97	277.6	789.1	1,106.9
98	262.3	804.4	1,066.7
99	299.5	797.0	1,096.5*
Total	2623.1	6852.7	9,481.0*

FY 2000 EST: - $1.5 billion
*Does include award modifications

As in prior years, in FY 1999 SBA continued to use a system of deficits and credits to evaluate agency SBIR budgets against actual amounts obligated.

Through its SBIR Policy Directive, SBA requires each participating agency to list the number of Phase I awards made both within 6 months and after 6 months of the closing date of its solicitation announcement. Table 4 (immediately following) provides this information for FY 1999.

Table 4: FY 1999-- Phase I Time Frame

Agency	Total FY 99 Phase I Awards	No. within 6 Months of Solicitation Close	No. More Than 6 Months After Solicitation Close
DOA	84	0	84
DOC	40	40	0
DOD	1,393	1,338	55
DOE	202	202	0
DOT	17	17	0
ED	40	40	0
EPA	47	47	0
HHS	927	824	103
NASA	344	344	0
NSF	240	240	0
TOTAL	3,334	3,092	242

Highlights of Cumulative Data

The SBIR program continues to receive recognition for quality performance. The following highlights accomplishments of the SBIR program since it began in FY 1983:

- Over $9.5 billion has been awarded.
- Participating agencies received a total of 326,173 Phase I and Phase II proposals in response to 226 SBIR solicitations. A total of 55,058 Phase I (40,477) and Phase II (14,581) awards have been made.
- Minority/ disadvantaged firms have received 6,828 awards, representing 12.4 percent of all SBIR awards. The value of these awards is $1.7 billion, representing 18 percent of all dollars awarded under the program.
- Awards have been made to firms in all 50 states, Puerto Rico and the District of Columbia.
- Several participating agencies have allocated more for this program than required by law. In accordance with the law, each participating agency will continue to award at least 2.5 percent of its R/R&D extramural budget each fiscal year.

SUCCESS STORIES

The following stories represent the most recent successes from FY 1999 SBIR awards issued by the participating Federal agencies.

CROPTECH CORPORATION
Blacksburg, VA

Biopharmaceutical manufacturing of recombinant therapeutic proteins has become a significant industry in the past decade. The promise of new drugs based upon genomic research is a major focus of traditional pharmaceutical companies as well as the new breed of "biotech" corporations. As more protein-based therapeutics enter clinical trials, shortages in manufacturing capacity threaten to slow their entry into the marketplace. CropTech Corporation aims to eliminate this bottleneck by using transgenic tobacco plants to produce these valuable proteins at a scale unobtainable by current methods.

Thanks to the support of the SBIR program, CropTech has been able to advance a conceptual technology past proof-of-concept and into commercial viability that is unique and potentially superior to other large-scale protein manufacturing systems. Using the SBIR program, CropTech has constructed a platform technology, which could revolutionize biopharmaceutical manufacturing. Taken as a whole, the SBIR program was critical to the early stage research and development efforts of CropTech.

In early 1993 an SBIR grant from the National Institutes of Health allowed CropTech's first employees to produce a useful therapeutic protein. Recombinant human glucocerebrosidase (r-hGC), a lysosomal enzyme used to treat Gauchers' disease, was produced by CropTech in transgenic tobacco. The enzyme was correct in sequence and fully active. It was previously believed that complex human enzymes could not be produced in plants.

The r-hGC project proved that tobacco could do the complex processing required for many recombinant protein therapeutics.

The reduction-to-practice of the original idea with the help of Federal support enabled CropTech to win additional SBIR awards that demonstrated the technology's applicability to a wider array of protein products. Also discovered during the follow-up projects was the potential of plants to be genetically engineered to secrete these protein products. This enhanced the efficiency of the technology and should reduce the commercial cost of downstream purification of plant-produced proteins.

Manufacturing recombinant proteins in the CropTech system will provide larger scale and lower cost products to the marketplace. Additionally, producing therapeutic proteins and vaccines in plants removes current safety concerns associated with manufacturing these proteins in mammalian cell culture systems. Among these concerns is the transfer of adventitious mammalian viruses and prions to the patient. Plants do not harbor viral pathogens that infect humans.

CropTech plans to use its manufacturing platform for producing not only biopharmaceutical proteins (vaccines, peptides, antibodies, and enzymes), but also for producing industrial enzymes. CropTech currently has 40 employees and 20 products under pre-clinical development.

SENSOR RESEARCH AND DEVELOPMENT CORPORATION
Orono, ME

Founded as a spin-off from the University of Maine in 1993, Sensor Research and Development Corporation (SRD) has grown from $100,000 to $5.5 million in 1999 and employs 50 people. Work performed by SRD in the area of thick-and-thin-film sensors is highly specialized and has the potential to result in small, portable, and inexpensive sensors. Most sensors are large, expensive, and require exacting calibration. SRD has received eight Phase I awards: four from the National Science Foundation; two from the Department of Energy; one from the National Institutes of Health; and one from the Department of Agriculture. SRD has also been awarded two Phase II awards: one from the National Institutes of Health to develop a portable nitric oxide monitor; and one from the National Science Foundation to develop a fish-freshness sensor. SRD has received four patents and has seven filings pending. SRD has received support to develop sensors for a chemical warfare detector, environmental monitors, and medical diagnostics. The chemical warfare detector was based on work performed under an SBIR award.

The research performed by SRD has grown in sophistication and continues to grow in complexity. The company has risen to the challenges of far more complex and risky research via standard proposal efforts outside the SBIR program. The experience gained within the SBIR program and the proven ability to successfully execute programs within the SBIR program has given SRD the credibility it needed to seek new opportunities with other Federal agencies and to develop new markets and business opportunities.

ORINCON CORPORATION
San Diego, CA

As a small business, ORINCON Corporation applies innovations in intelligent systems technology to military and civilian applications. The company has been SBIR involved since June 1988, having now received over 100 Phase I awards. More than 40 of these efforts have transitioned to Phase III non-SBIR development funding, including 26 that took the traditional Phase II SBIR route, and 17 that transitioned directly from the Phase I effort into commercial application. These SBIR transitions have resulted in more than $44 million in Phase III revenues to date, including product introductions in fields as diverse as transportation, health and safety, defense and financial analysis.

Founded 25 years ago, the company began in submarine tracking and target classification for U.S. Navy applications in the Cold War and has diversified into a broad range of military, civilian government and commercial applications. ORINCON has grown to approximately 170 employees and annual revenues approaching $25 million.

As a research and development company, ORINCON concentrates on development of working prototypes that demonstrate the effectiveness of a particular technology. With this business emphasis, SBIR has been and continues to be ORINCON's primary source of startup funding to explore the commercial feasibility of new ideas. Once a development effort has been launched, the company then invests over $1 million each year to pursue applications of the technology.

The company pursues product developments and commercial introductions with Phase III transition partners that are usually hardware manufacturers.

ORINCON's continued participation then may take the form of technology licensing to its associate company, ORINCON Technologies, Inc., or to another company, an equity share in a joint venture company or patent royalties.

ORINCON's RIPPEN graphical signal processing programming tool, initiated by a Defense Advanced Research Projects Agency SBIR, is in service with government and civilian organizations worldwide. It has been adopted by companies such as Raytheon TI and Thomson Marconi Sonar as an indispensable development tool.

In the defense arena, ORINCON's SBIR-based intelligent submarine tracking software is at the heart of the Multipurpose Processor currently being installed in the nation's nuclear submarine fleet under the Advanced Processor Build program, a means to introduce technological innovations to major weapon systems.

General Information

Publications Update

All publicly distributed SBIR documents have been updated and are available on the SBA's electronic bulletin board, SBA On-Line. The bulletin board can be accessed 24 hours a day via modem or the Internet, eliminating the printing, mailing and storage costs previously incurred for SBIR publications. Information is published on the bulletin board at the same time it is available in hard copy.

National Conferences

The Department of Defense and the National Science Foundation sponsored SBIR conferences in FY 1999 in Washington, DC; Boston, Massachusetts; and Billings, Montana.

General Information

The SBA has offices located throughout the United States. For the one nearest you, look under "U.S. Government" in your telephone directory, or call the SBA Answer Desk at (800) 8-ASK-SBA. To send a fax to the SBA, dial (202) 205-7064. For the hearing impaired, the TTD number is (704) 344-6640.

To access the Agency's electronic public information services, you may call the following:

- SBA On-Line: electronic bulletin board modem and computer required:

  (800) 697-4636 (limited access)
  (900) 463-4636 (full access)
  (202) 401-9600 (DC metro area)

- Internet: using uniform resource locators URLs
- SBA Home Page: http://www.sba.gov/sbir
- SBA gopher: gopher://gopher.sba.gov
- File transfer protocol: fftp://ftp.sba.gov
- Telnet: telnet://sbaonline.sba.gov
- U.S. Business Advisor: http://www.business.gov

You also may request a free copy of The Resource Directory for Small Business Management, a listing of for-sale publications and videotapes, from your local SBA office or the SBA Answer Desk.

State	Phase 1 Awards	Phase 1 Dollars	Phase 2 Awards	Phase 2 Dollars	Total Awards	Total Dollars
Alabama	70	6,356,122	15	8,290,287	85	14,646,409
Alaska	1	59,000	0	0	1	59,000
Arizona	72	6,043,824	26	14,126,689	98	20,170,513
Arkansas	9	906,145	1	393,152	10	1,299,297
California	689	64,102,033	221	136,247,825	910	200,349,858
Colorado	152	13,058,993	82	50,720,710	234	63,779,703
Connecticut	70	6,269,966	23	12,756,467	93	19,026,433
Delaware	14	1,363,600	4	1,837,975	18	3,201,575
Dist.of Columbia	17	1,577,146	8	4,629,368	25	6,206,514
Florida	67	5,639,317	29	16,110,497	96	21,749,814
Georgia	28	2,403,914	18	10,399,321	46	12,803,235
Hawaii	21	1,664,863	6	1,875,166	27	3,540,029
Idaho	5	339,074	2	755,244	7	1,094,318
Illinois	53	4,927,253	20	8,202,642	73	13,129,895
Indiana	21	1,810,650	10	5,298,044	31	7,108,694
Iowa	6	501,812	3	1,453,553	9	1,955,365
Kansas	14	1,155,382	3	1,719,652	17	2,875,034
Kentucky	7	523,289	5	2,278,771	12	2,802,060
Louisiana	6	417,934	1	399,976	7	817,910
Maine	15	1,260,778	3	822,988	18	2,083,766
Maryland	186	17,396,535	57	32,817,271	243	50,213,806
Massachusetts	516	47,205,607	192	115,296,956	708	162,502,563
Michigan	51	4,867,983	20	10,230,619	71	15,098,602
Minnesota	42	3,633,316	19	10,045,546	61	13,678,862
Mississippi	11	896,440	0	0	11	896,440
Missouri	16	1,082,334	5	2,920,175	21	4,002,509
Montana	12	1,040,759	4	2,496,570	16	3,537,329
Nebraska	3	286,991	2	666,873	5	953,864
Nevada	7	569,688	2	1,156,970	9	1,726,658
New Hampshire	41	3,362,534	14	8,105,874	55	11,468,408
New Jersey	106	9,528,264	39	23,535,326	145	33,063,590
New Mexico	65	5,659,194	28	18,485,243	93	24,144,437
New York	129	11,996,996	50	29,436,071	179	41,433,067

ordered by: State

*Based on awards issued and funding obligations for new awards only.

U.S. Small Business Administration
Office of Technology
Total SBIR Awards for Fiscal Year 1999

State	Phase 1 Awards	Phase 1 Dollars	Phase 2 Awards	Phase 2 Dollars	Total Awards	Total Dollars
North Carolina	36	3,641,887	15	9,450,298	51	13,092,185
North Dakota	4	338,731	1	225,000	5	563,731
Ohio	110	10,145,875	47	29,743,548	157	39,889,423
Oklahoma	6	568,723	5	2,802,470	11	3,371,193
Oregon	39	3,610,446	20	9,710,464	59	13,320,910
Pennsylvania	91	8,219,579	49	28,685,286	140	36,904,865
Puerto Rico	1	62,409	0	0	1	62,409
Rhode Island	7	558,598	4	1,782,664	11	2,341,262
South Carolina	5	456,191	3	1,204,900	8	1,661,091
South Dakota	4	398,779	3	1,243,807	7	1,642,586
Tennessee	25	2,090,577	9	4,815,485	34	6,906,062
Texas	112	9,963,269	51	28,920,677	163	38,883,946
Utah	37	3,357,656	12	6,130,076	49	9,487,732
Vermont	12	1,096,650	5	2,186,796	17	3,283,446
Virginia	164	14,062,446	77	48,988,325	241	63,050,771
Washington	86	8,520,229	32	16,840,534	118	25,360,763
West Virginia	3	265,178	2	1,478,995	5	1,744,173
Wisconsin	39	3,657,015	12	6,421,480	51	10,078,495
Wyoming	9	778,608	0	0	9	778,608