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Introduction

This report is the tenth annual report presented by the U.S. Small Business Administration (SBA) pursuant to Public Law 102-564, the Small Business Research and Development Enhancement Act of 1992, as amended.

This report describes the operation and administration of the Small Business Technology Transfer program (STTR) for Fiscal Year (FY) 2003. This report also provides data on the results of the first 10 years of the STTR program, including the number of solicitations released, the number of proposals received and the number of awards resulting from those solicitations.

Summary of Legislation

Public Law 102-564, as amended

Title I of Public Law 102-564 amended the Small Business Act by reauthorizing the Small Business Innovation Research (SBIR) program. After extensive hearings by several committees and review of extensive testimony from numerous experts, Federal government officials, participating small businesses, beneficiaries, and oversight groups including the Government Accountability (GAO) Office, Congress passed P.L. 102-564. At the time it was reauthorized, the SBIR program had been in effect for a decade, during which it achieved remarkable success in its program goals of helping small businesses develop important technology and helping keep the Nation at the forefront of technological innovation.

Seeking to further expand small business opportunities in the technical arena, Congress passed Title II of the Act establishing the STTR program.

The STTR program shares the underlying philosophy of the SBIR program. It recognizes Federally funded research and development as a base for technological innovation that will contribute to the growth and strength of the Nation’s economy. It differs from the SBIR program in that STTR awards are made to small businesses that pursue technological innovation through cooperative research and development with Federal laboratories and non-profit scientific and educational institutions.

Duration of the Program

The Small Business Technology Transfer Program

Funding

Federal agencies that participate in the STTR program must have an extramural budget for research or research and development in excess of $1 billion. Program guidelines established the following percentages of funds an agency could expend with small businesses in connection with the STTR program:

- Not less than 0.05 percent of such budget in fiscal year 1994;
- Not less than 0.1 percent of such budget in fiscal year 1995;
- Not less than 0.15 percent of such budget through fiscal year 2003; and
- Not less than 0.3 percent of such budget in fiscal year 2004 and each fiscal year thereafter.

Federal Agencies Participating

The five Federal agencies that meet the funding threshold and participate in the program are:

- Department of Defense
- Department of Energy
- Department of Health and Human Services
- National Aeronautics and Space Administration
- National Science Foundation

The Three-Stage STTR Process

Public Law 102-564 structured the STTR program as a three-phase process designed to identify and nurture promising research and development interests within the small business community. These phases are:

**Phase I:** Awards are made to determine, to the extent possible, the scientific, technical, and commercial merit and the feasibility of ideas submitted. Phase I awards generally will not exceed $100,000 and are for a 1-year effort. Award amounts are set at the discretion of the participating agencies.

**Phase II:** In Phase II, Phase I projects with the most potential may be funded to further develop ideas to meet particular program goals. Phase II awards will generally not exceed $500,000 for a 2-year effort. Specific amounts awarded are at the discretion of the awarding agencies.
**Phase III:** No Federal STTR funds are expended during this phase. In Phase III, program participants pursue commercial applications of the innovations developed in Phases I and II. However, in Phase III, program participants may receive additional non-STTR Federal funds to develop products and services for use by the Federal government. They may also receive awards from non-STTR Federal funding sources for continuation of competitively selected research and research and development.

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**Eligibility for Participation in STTR**

The STTR program involves cooperative research and development performed jointly by a small business and a research institution. Thus, each STTR project involves at least two partners, each of which must meet eligibility criteria in order for the project to be funded.

To be eligible for an STTR award, a **small business** must have no more than 500 employees, be independently owned and operated, not be dominant in the field of operation in which it is proposing, have its principal place of business in the United States, be organized for profit, and be primarily owned by U.S. citizens.

To be eligible for participation in an STTR award, a **research institution** must be a non-profit institution as defined by the Stevenson-Wydler Technology Innovation Act of 1980, or a federally funded research and development center (FFRDC) as identified by the National Science Foundation in accordance with the Office of Federal Procurement Policy Act. Thus, most universities and colleges, non-profit research centers, and Federal government-owned, company-operated laboratories are eligible.

Small businesses interested in participating in the STTR program are required to find a research institution meeting this definition and to develop a working agreement before proposing to compete for an STTR award.

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**Distribution of Work**

An STTR award is intended to be a true partnership venture for both the small business and the research institution. To ensure such a relationship, the program establishes minimum performance levels for each participant. Public Law 102-564, as amended, stipulates that under an STTR award, the small business must perform at least 40 percent of the work, and the research institution must perform at least 30 percent of the work.

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**Management of STTR Projects**

Although the conduct of the project is a cooperative research and development venture, the small business exercises overall management, control, and responsibility for the project.

Participating agencies are required to ensure that the small business manages and controls the funding agreement pursuant to a business plan that provides for the commercialization of the technology being funded.

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**Continued Use of Federal Government Property**

STTR guidelines also direct Federal agencies to allow small businesses that use Federal government equipment during the conduct of an STTR award to continue to do so for not less than 2 years after the beginning of Phase III.
Model Agreements

Public Law 107-50 directs SBA to establish guidelines for a model agreement to be used by all STTR participating agencies in allocating intellectual property rights and follow-on rights.

Representatives of each of the five participating agencies issued two model agreements: one published by the Departments of Energy and Health and Human Services, and the other published by the Department of Defense, the National Science Foundation, and the National Aeronautics and Space Administration.

The SBA is currently developing a single model agreement that can be used by all the participating agencies. SBA is reviewing current intellectual property rights issues that arise in the STTR program and is working with the agencies to develop the appropriate guidelines.

Small businesses are required to negotiate agreements with research institutions, but they are not required to use the model agreements. They are free to formulate and execute their own agreements or to use the models in whole or in part.

Rights to Data

A major concern of small, innovative firms is that data generated while performing research and development for the Federal government will be made public. Therefore, STTR legislation stipulates that the program provide for the small business to retain the rights to data it generates while performing in the STTR program. These retention rights remain effective for at least 4 years. The intent of this provision is to authorize the participating agency to protect technical data generated under the STTR funding agreement and to refrain from disclosing such data to competitors of the small business. The STTR Policy Directive stipulates that the agency cannot use the information to produce future technical procurement specifications, thus protecting the participating small business until it has a reasonable chance to seek patent protection, if appropriate.

Therefore, the Policy Directive mandates that, except for program evaluation, participating agencies must protect technical data for at least 4 years from the completion of the project that generated the data. The Federal government, however, retains a royalty-free license for Federal government use of any technical data delivered under an STTR funding agreement, whether patented or not.

Follow-On Funding Agreements

Following completion of Federal research and development contracts, it is not unusual for the agency involved to have further research and development interests that result in a continuation of work. There have been numerous instances in which, following the completion of Phase II of STTR, agencies had chosen to continue development of an innovation to produce a product or service developed under the STTR award. To ensure smooth continuation of this work, protect the commercial rights to the innovation, and continue to employ the expertise of the originating small business, agencies are directed, to the degree practicable, to award any non-STTR, follow-on contracts or grants to the originating small business. To make this process more efficient, participating agencies have been advised that the competition for an STTR award serves as meeting the requirements of the Competition in
Contracting Act. This allows the agencies to award non-STTR, follow-on work to the small business without further competition.

Critical Technologies

STTR legislation requires agencies to give special consideration to broad research topics and to topics that further one or more critical technologies. These technologies are identified by the National Critical Technologies Panel (or its successor). To assist the agencies, SBA annually requests a complete listing of critical technologies from the National Critical Technologies Panel and the Office of the Secretary of Defense. These listings were sent to each participating agency.
Responsibilities of the Participants

The authorities and responsibilities of Federal agencies participating in the STTR program are to:

1. Unilaterally determine categories of projects to be included in its STTR program.

2. Issue STTR solicitations according to a schedule determined cooperatively with the SBA.

3. Unilaterally determine research topics within the agency's STTR solicitations, giving special consideration to broad research areas that further one or more critical technologies as identified by either the National Critical Technologies Panel or the Secretary of Defense.

4. Unilaterally receive and evaluate proposals resulting from STTR solicitations.

5. Unilaterally select awardees for its STTR funding agreements and inform each awardee, to the extent possible, of the allowable expenses under the funding agreement.

6. Administer its own STTR funding agreements.

7. Pay recipients on the basis of progress toward or completion of the STTR funding agreement requirements.

8. Submit an annual report on the STTR program to the SBA and the Office of Science and Technology Policy.

9. Develop a model agreement for approval by the SBA that allocates between small businesses and research institutions' intellectual property rights and any rights to carry out follow-on research, development, or commercialization.

10. Develop procedures in consultation with the Office of Federal Procurement Policy and the Office of Federal Government Ethics to ensure that federally funded research and development centers that participate in STTR agreements:

   A) Are free from organizational conflicts of interest relative to the STTR program.

   B) Do not use privileged information gained through work performed for an STTR agency or private access to STTR agency personnel in the development of an STTR proposal.

   C) Use outside peer review, as appropriate.
11. Develop procedures for assessing the commercial merit and feasibility of STTR proposals.

12. Implement an outreach program.

13. Collect and maintain information for a database.

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Small Business Administration

Public Law 102-564 designated the SBA as the lead Agency to implement the program, govern its policy, and monitor and analyze its performance. As the lead Agency, the SBA’s authorities and responsibilities are to:

1. Develop, coordinate, and issue a Policy Directive for the general conduct of the STTR programs.

2. Assist small businesses in obtaining Federal government contracts for research and development.

3. Assist small businesses in obtaining benefits of research and development performed under Federal government contracts or at Federal government expense.

4. Provide technical assistance.

5. Develop and maintain a source file and an information program to help ensure each qualified and interested small business the opportunity to participate in technology transfer pilot programs involving Federal agencies.

6. Coordinate with participating agencies a schedule for release of STTR solicitations and prepare a master release schedule that maximizes small business opportunities to respond to solicitations.

7. Independently survey and monitor the operation of STTR programs within participating Federal agencies.

8. Report not less than annually to the Congress on the STTR programs and the Administration’s information monitoring efforts related to the STTR program.

9. Consult, cooperate, perform studies, and make recommendations to Federal government agencies.

10. Consult with representatives of small business to assist and encourage such firms to undertake joint programs for research and development.

11. Develop, maintain and make available a database of the STTR program information.

As defined in Section 9 of the Small Business Act, the SBA has designed and implemented the Technology Resources Network (Tech-Net) to streamline and standardize the reporting of STTR awards and applicant information by the Federal agencies required to participate in the STTR program. This process involved the SBA establishing several working sessions with the agencies to define the input data fields and a core set of output reports to help facilitate the agencies administration of the program. The SBA incorporated the unique needs of each agency into the design of the database system to insure that the system would provide much needed award and applicant information. Information such as name, size, location, abstracts and identifying number of each small business concern that has received a Phase I or Phase II award is available in this database. Agencies now have the ability to review awards and applicant information, and edit previously reported data interactively through Tech-Net. The public version of this database can be accessed by visiting the website http://tech-net.sba.gov.
The SBA is currently developing the government database which will maintain information on all Phase II awards funded under the STTR program. This database will not be accessible by the public; therefore, any confidential information that is provided by the STTR Phase II awardees will not be disclosed to the public. A username and password will be required to access the database. The SBA will control the issuance of the username and passwords. Coordination with the participating agencies is critical in the development process to insure that the database data elements will capture sufficient information that will allow the SBA, each participating agency, GAO, the National Academy of Science and the Congress to effectively measure the impact and success of the program. The SBA intends to have the government database implemented and functional on or before October 1, 2005.

The SBA, in coordination with the participating agencies, will also direct the participating agencies to reduce regulatory burdens associated with participation in STTR programs. In addition, the directive also provides guidelines for a model agreement to be used by all agencies for allocating intellectual property and other rights between small businesses and research institutions. It also provides procedures to ensure that recipients of STTR awards meet eligibility requirements as small businesses and that they manage and control the performance of the STTR funding agreement.

Finally, the directive instructs the participating agencies to develop procedures to ensure follow-on, non-STTR funding agreements with the small business when appropriate.

Pursuant to Public Law 107-50, the current policy directive is being revised. See 68 Fed. Reg. 35748 (June 16, 2003)

Surveying, Monitoring, and Reporting

Pursuant to the legislation, the SBA is required to independently survey and monitor the operation of the STTR programs within participating Federal agencies. The law directs SBA to report not less than annually to the Committee on Small Business of the Senate and the House of Representatives and to the Committee on Science of the House of Representatives on the STTR programs of the Federal agencies.
Public Law 102-564, as amended, provided both general guidance and specific instructions concerning the implementation of the STTR program. To ensure a successful implementation, the law specifically directed several important actions and established completion dates. All mandated actions were implemented in a timely manner.

Solicitation Schedule

STTR policy directs each Federal agency participating in the program to issue STTR solicitations in accordance with a schedule determined cooperatively with the SBA. After approval of SBA's master schedule, these agencies issued solicitations early in fiscal 2003 to invite small business to propose STTR projects.

After approval of its solicitation schedule, each participating agency provided SBA with information necessary to publish a pre-solicitation announcement. The announcements provided interested small businesses with information on forthcoming opportunities in the STTR program, as well as basic information on program requirements, opening and closing dates of solicitations, and agency contact points for further information.

For FY 2003, the participating agencies had the following solicitation periods:

- Department of Health and Human Services - January 2003 with closings April 1, August 1 and December 1, 2003.

Award Obligation Requirements

Program policy required participating agencies to expend on STTR awards not less than 0.15 percent of their fiscal year 2003 extramural budget for R/R&D. In fiscal year 2003, $97,656,929 should have been obligated program-wide to meet this requirement; however, actual obligations were $96,665,553.

Small-Business Participation

During FY 2003, small businesses submitted 2,040 proposals under the STTR program, including 1,808 Phase I proposals and 232 Phase II proposals. A total of 508 awards were made,
including 397 Phase I awards and 111 Phase II awards. Awards were made to 414 small businesses. In FY 2003, total STTR program obligations were $96,665,553. Small business received $63,231,013 or 65 percent of total funding. Research institutions received $41,225,194 or 42 percent.

Minority and Disadvantaged Firms

Of the 414 firms that successfully competed for STTR awards, 42 or 10.1 percent were firms owned by minority or disadvantaged persons. They received $4,943,286 or 5 percent of the $96,665,553 total obligated.

HUBZone Small Business Concerns

The participating agencies made one Phase I award totaling $69,985 to a HUBZone certified small business concern.

Research Institutions

Small businesses interested in participating in the STTR program must find a research institution that meets the program's definition and develop a working agreement before proposing to compete for an STTR award.

The statistics available at the end of the fiscal year indicate that 414 firms collaborated with 205 research institutions. Of contracts and grants awarded during the year, 472 were made to universities and colleges, 19 to Federally funded research and development centers, and 50 to other non-profit research institutions. The research institutions were located in 46 states, the District of Columbia and Puerto Rico.

Table 1: Number of STTR Awards—FY 1994 through FY 2003

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Table 2: Value of STTR Awards—FY 1994 through FY 2003

(In millions of dollars)

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*Does not include modifications

Highlights of Cumulative Data

The STTR program continues to receive recognition for quality performance. The following highlights accomplishments of the STTR program since it began in FY 1994:

- More than $645 million has been awarded.
- Participating agencies have received a total of 13,906 Phase I and Phase II proposals in response to 50 STTR solicitations. A total of 3,422 Phase I (2,623) and Phase II (799) awards have been made.
- Minority/disadvantaged firms have received 354 awards, representing
10.3 percent of all STTR awards. The value of these awards is $68.3 million, representing 10.5 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.
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<td>Boston University</td>
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<td>Harvard University</td>
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<td>Massachusetts General Hospital</td>
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<td>Brigham and Women's Hospital</td>
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<td>Marine Biological Laboratory</td>
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**Maryland**

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**Michigan**

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**Minnesota**

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**Missouri**

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**Mississippi**

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**Montana**

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**North Carolina**

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<td>Duke University</td>
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<td>North Carolina State University</td>
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<tr>
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**North Dakota**

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<tr>
<td>Boys Town National Research Hospital</td>
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**New Hampshire**

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**New Jersey**

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<tr>
<td>New Jersey Institute of Technology</td>
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<tr>
<td>University of Medicine &amp; Dentistry of New Jersey</td>
<td>University of Medicine &amp; Dentistry of New Jersey (2)</td>
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<td>Stevens Institute of Technology</td>
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<td>Princeton</td>
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**New Mexico**

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**New York**

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<td>New York</td>
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<td>Other</td>
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FY 2003 STTR Phase I Awardees

**Alabama**

*Alabaster*
Avanti Polar Lipids, Inc.

*Birmingham*
Tranzyme, Inc.

*Huntsville*
Plasma Processes, Inc.
Phase IV Systems, Inc.
CFD Research Corp. (5)

*Madison*
John Tiller

**Arizona**

*Chandler*
Crawdad Technologies, L.L.C.

*Phoenix*
Lytek Corp.

*Scottsdale*
Zona Technology Inc.

**California**

*Altaadena*
Parasym

*Apple Valley*
Eddy Company

*Brea*
Paulson Geophysical Services, Inc. (2)

*Costa Mesa*
AVYD Devices, Inc.
Irvine Sensors Corp.

*Davis*
Net Squared, Inc.

*Hercules*
HTD Biosystems, Inc.

*Inglewood*
Foam Matrix, Inc.

*Irvine*
Waveband Corp.

*La Jolla*
Seashell Technology LLC (2)
Applied Tissue And Materials, Inc.
Ansata Therapeutics, Inc.

*Los Angeles*
IA Tech, Inc.
Hexagon Interactive, Inc.

*Moffett Field*
Realtime Methods

*Moorpark*
Cal Nova Tech, Inc.

*Mountain View*
Nielsen Engineering & Research, Inc.

*Pasadena*
Cyrano Sciences, Inc.

16
Emerald Events, Inc.

Pomona

Sysense Corp.

Redwood City

Realistic Dynamics, Inc.
Panomics, Inc.

Richmond

Microassembly Technologies, Inc.

Rolling Hills Estates

Advanced Engineering Solutions

Rosamond

W. E. Research LLC (2)

San Diego

Mitokor, Inc.
Surface Optics Corp.
Quantum Applied Science & Research, Inc.
Ultraviolet Sciences, Inc.

San Francisco

International Frontier Science Organization

San Jose

Immersion Corp.

Santa Clara

HPS Simulations
Altex Technologies Corp.

Saratoga

Calabazas Creek Research, Inc.

Sherman Oaks

Arete Assoc.

South San Francisco

Biospect, Inc.

Stanford

Optus

Sun Valley

Powdermet, Inc.

Sunnyvale

Intelligent Inference Systems Corp.
SC Solutions
Cepheid
Advanced Genetic Systems
Picarro, Inc.
Memx, Inc.

Torrance

ACTA, Inc. (2)
Nextgen Aeronautics

Victorville

Exquadrum, Inc.

Colorado

Boulder

Extreme Diagnostics, Inc.
Knowledge Analysis Technologies, LLC.
Opttek Systems, Inc.
Develosoft Corp.
Droplet Measurement Technologies
Vexcel Corp

Colorado Springs

Navsys Corp.
DES

Denver

Vescent Photonics

Fort Collins

Kaufman & Robinson, Inc.

Lafayette

Composite Technology Development, Inc.
Littleton
Percepekt
ITN Energy Systems Incorporated

Louisville
RxKinetix, Inc.

Westminster
ALD Nanosolution, Inc. (2)

Wheat Ridge
TDA Research, Inc. (2)

Connecticut
Danbury
Fuelcell Energy, Inc.

Monroe
Materials Technologies Corp.

New Haven
L2 Diagnostics, LLC

Shelton
Medergy, Inc.

Waterford
Sonalysts, Inc. (2)

Delaware
Newark
EM Photonics, Inc.
Agoranet, Inc.

District of Columbia
Synergene Therapeutics, Inc.

Florida

Alachua
Somatocor Pharmaceuticals, Inc. (3)

Gainesville
Interdisciplinary Consulting Corp.
Hypercube
New Era Technology

Melbourne
AET, Inc.
Security Innovation, LLC

Orlando
Rini Technologies, Inc.

Sarasota
Guardian Solutions

St. Petersburg
Custom Manufacturing & Engineering, Inc.

Tampa
Saneron Ccel Therapeutics, Inc.

Georgia

Atlanta
Microcoating Technologies, Inc.
Cermet, Inc. (2)
Innovative Fluidics, Inc.
Global Technology Connection, Inc.
Microcoating Technologies, Inc.
VT Silicon, Inc.
Vivonetics

Decatur
Virtually Better, Inc.

Dunwoody
Transfusion and Transplantation Technology
Idaho
Troy
Manning Applied Technology

Illinois
Batavia
Muons, Inc.
Champaign
Ini Power Systems, Inc.
Computerized Medical Systems, Inc.

Evanston
Ziena Optimization Inc.
Rosemont
IBEX Healthdata Systems
Urbana
CU Aerospace LLC

Indiana
Bloomington
Parttec, Ltd.
West Lafayette
In Space, L.L.C.
Endocyte, Inc.

Iowa
Webster City
Interactive Medical Development, LLC

Kentucky
Lexington
Cardiojustable, LLC
Naprogenix, Inc.

Louisiana
New Orleans
Omni Technologies, Inc.

Maryland
Annapolis
Embedded Research Solutions, LLC
Arnold
Info-Ops / Infoassure, Inc.

College Park
Anthrotronix, Inc.

Havre De Grace
CCL Biomedical, Incorporated
Lanham
Techno-Sciences, Inc. (3)

Rockville
Intelligent Automation, Inc. (5)
Silver Spring
Simquest International, Inc.

Timonium
Biomed Innovations, LLC

Massachusetts
Andover
Physical Sciences, Inc. (2)
Research Support Instruments
Bedford
Eukarion, Inc. (2)
Belmont
Praxis, Inc.
Natural Pharmacia International, Inc.

Beverly
Seafire Micros, Inc.

Boston
Nanopharma, Corporation

Brookline
Boston Array Technology

Burlington
Mayflower Communications Company, Inc.
Alphatech, Inc.

Cambridge
Charles River Analytics, Inc. (2)
Metis Design Corp. (2)
Genetix Pharmaceuticals, Inc.
Molecular Insight Pharmaceuticals, Inc.
Biostream Therapeutics, Inc.

Chelmsford
Lutronics Inc.
Triton Systems, Inc. (2)

Framingham
GTC Biotherapeutics, Inc.

Lexington
EXA Corporation

Mansfield
Boston Applied Technologies, Inc.

Natick
Busek Co., Inc.

Newton
Gene Regulation Laboratories

Norwood
EIC Laboratories, Inc.

Somerville
Sensimetrics Corp.
Science Research Laboratory, Inc.

Walpole
Migma Systems, Inc. (2)

Waltham
Foster-Miller, Inc. (3)

Watertown
Energid Technologies

Wilbraham
Virtual Brands (2)

Woburn
Magnolia Optical Technologies, Inc.
Scientific Systems Company, Inc.
Agiltron Corp.
Aptima, Inc.
Kazak Composites, Inc.
Boston Applied Technologies, Incorporated
Scientific Systems Co Inc

Woods Hole
Biocurrents Research, Inc.

Michigan

Ann Arbor
Electrodynamic Applications, Inc.
Intelligent Prosthetic Systems

Ferndale
Thermal Wave Imaging, Inc.

Grosse Ile
The Technology Partnership
Minnesota

Arden Hills
Audiology, Inc.

Eden Prairie
Architecture Technology Corp.

Minneapolis
Red Wing Technologies, Inc.

Mississippi

Oxford
Elsohly Laboratories, Inc.

Starkville
MPI Software Technology, Inc.

Missouri

Columbia
Renewable Alternatives, LLC

St. Louis
Virrx, Inc.

Montana

Bozeman
Golden Helix, Inc.
Hylitech
ADVR inc

Butte
MSE Technology Applications, Inc.

Nebraska

Omaha
Sonicom, Inc.

Nevada

Carson City
Sierra Engineering, Inc. (2)

Las Vegas
First American Scientific Corporation

New Hampshire

Nashua
Creare, Inc.

Hanover
Scientific Solutions, Inc.

New Jersey

Monmouth Junction
Princeton Scientific Instruments, Inc. (2)

Newark
Nanomedica, Inc.

North Brunswick
Access Bio, Inc.

Parsippany
Mechanical Solutions Inc

Pine Brook
CF Technologies, Inc.

Piscataway
Structured Materials Industries, Inc.

Princeton
Sovoz, Inc.
New Mexico

Albuquerque
Management Sciences, Inc.
Dominca
TPL, Inc.

Ranchos De Taos
Nukove Scientific Consulting, LLC

Santa Fe
Southwest Sciences, Inc.

New York

Albany
Precision Magnetic Bearing Systems, Inc.

Brewster
Nano Science Diagnostics, Inc.

Clifton Park
Kitware, Inc.

Cortland
Ithaca Mechanical Systems Corp.

Glen Head
Nirx Medical Technologies, LLC

Harford
Clear Science Corp.

Hauppauge
Advanced Acoustic Concepts, Inc.

Hawthorne
Anvik Corporation

Ithaca
-9 2 -6.LLC

Long Island City
Voicemethods LLC

New York
Callisto Pharmaceuticals, Inc.

Rochester
Impact Technologies, LLC (2)

Stony Brook
Vitatex, Inc.

Syracuse
Orthosystems, Inc.
Advanced Resonance Technologies, Inc

Tonawanda
Integument Technologies, Inc.

Westbury
Ala Scientific Instruments, Inc.

North Carolina

Brevard
Pharmagra Labs, Inc.

Cary
Engineous Software

Charlotte
Breathquant Medical Systems, Inc.

Durham
Nekton Research LLC
Williams Lifeskills, Inc.
Pyramis Studios, Inc.

Greensboro
Tanglewood Research, Inc. (2)
Raleigh
Center Line Productions

North Dakota
Grand Forks
Denet Labs LLC

Ohio
Akron
Creative Action, Inc.

Beavercreek
Thot, Ltd.
Defense Research Assoc., Inc.

Cincinnati
Pegasus Technical Services, Inc.
Technosoft, Inc.

Clayton
Faraday Technology Inc

Cleveland
Ridgeway Biosystems, Inc.

Columbus
Srico, Inc.
Aetion Technologies LLC
Deca-Medics
Oncoimmune, Ltd
Sensirox, Inc.

Dayton
UES, Inc.
Innovative Scientific Solutions, Inc.
MTL Systems, Inc.
Innovative Scientific Solutions, Inc.
Cornerstone Research Group, Inc.

Dublin
Applied Engineering Solutions, LLC

Euclid
Powdermet, Inc.

Rocky River
Sensor Development Corporation

Springfield
Cobalt Solutions, LLC

Troy
Hyper Tech Research, Inc. (2)

Washington Township
Automation, Integration of Information & Sy

Oklahoma
Oklahoma City
JK Autoimmunity, Inc.

Stillwater
Nomadics, Inc.

Oregon
Tigard
Sunset Laboratory, Inc.
Virogenomics, Inc. (3)

Wilsonville
Chinook Power Technologies LLC (2)

Pennsylvania
Allison Park
Pulsemetrics, LLC

Bethel Park
Digimmune Corporation

Blue Bell
Imaging Microsensors, Inc.
Collegeville
Advanced Fibers & Powders, LLC (2)

Huntingdon Valley
Immunicon Corporation

Irwin
Extrude Hone Corp.

Lower Gwynedd
Chi Systems, Inc. (2)

McMurray
Biosafe, Inc.

North Huntingdon
Nanomat, Inc.

Philadelphia
Integral Molecular

Pittsburgh
Agentase LLC
Fluorous Technologies, Inc. (2)

Radnor
Yaupon Therapeutics, Inc. (2)

State College
KCF Technologies, Inc.
TRS Ceramics, Inc.

Williamsport
Qortek, Inc.

Rhode Island
Middletown
KVH Industries, Inc.
Marine Acoustics, Inc. (2)

South Carolina
Columbia
Sensor Electronic Technology, Inc.

South Dakota
Sioux Falls
South Dakota Health Technology Innovations, Inc.

Tennessee
Cookeville
Flexial Corp.

Franklin
Arthrochip, LLC

Memphis
Greystone Medical Group, Inc.
GTX, Inc. (2)

Texas
Austin
Nanohmics, Inc. (2)
Innovalight, Inc.

College Station
Lynntech, Inc. (2)

Dallas
Marlow Industries, Inc.
Custom Scientific

Fort Worth
Williams-Pyro, Inc. (2)

Houston
GTL Technologies, Inc.
Nanospectra Biosciences, Inc. (3)
Inflame Therapeutics, Inc. (2)
Lasergen
Atactic Technologies, Inc.

_Missouri City_
General Vortex Energy, Inc.

_Palestine_
Product Concept Development, Inc.

_Plano_
Asier Technology Corp.

_Rockwall_
Global Contour, Inc. (2)

_San Antonio_
E-Spectrum Technologies, Inc.

_Smithville_
Dermigen, Inc.

_Utah_
Orem
Apollo Light Systems, Inc.

_Provo_
Larson Davis, Inc.

_Virginia_
Arlington
Management Communications & Control Inc.
Information Extraction & Transport, Inc.

_Ashburn_
Aeroastro Corp

_Blacksburg_
Luna Innovations, Inc. (2)
Technology in Blacksburg, Inc.

_Charlottesville_
Barron Assoc., Inc. (2)

_Christiansburg_
Nanosonic, Inc.

_Dulles_
Cigital, Inc.
Edenspace Systems Corporation

_Fairfax_
Center for Remote Sensing, Inc.
Materials Modification, Inc.
Microwave Technologies, Inc.
Materials Modification, Inc.

_Glen Allen_
Sentor Technologies, Inc.

_Herndon_
21st Century Systems, Inc.
Focus/MRL, Inc.-MRL Pharmaceutical Srvs

_Radford_
Brontek Delta Corp.

_Reston_
Objectvideo
Planning Systems, Inc.

_Roanoke_
Blue Ridge NCA Corp.

_Sterling_
Astron Antenna Co.

_Vienna_
Tecsec, Inc.

_Washington_
Bothell
Aculight Corp.
Kennewick
Vista Engineering Technologies, LLC

Kirkland
Stirling Dynamics Inc

Lynnwood
Tethers Unlimited

Olympia
Barlow Scientific, Inc.

Richland
Yahsgs LLC

Seattle
Isotron Corp.
Dentigenix (2)
Insilicos LLC

Wisconsin
Madison
StrataTech Corporation

Virent Energy Systems LLC
Stress Photonics Inc
Genetic Assemblies, Inc.
Orbital Technologies Corp (2)

Wyoming

Laramie
Firehole Technologies
CC Technology, Inc.

Powell
Drakon Energy LLC
FY 2003 STTR Phase II Awardees

Alabama

Huntsville
CFD Research Corp.

Arizona

Tucson
Advanced Ceramics Research, Inc.

California

Berkeley
Imagize LLC

Carlsbad
Luxtera, Inc.

Fountain Valley
Hybrid Plastics

Glendale
Physical Domains

Goleta
Toyon Research Corp.

La Jolla
Molsoft, LLC

Mojave
Xcor Aerospace, Inc.

Mountain View
CSA Engineering, Inc.
Fakespace Labs, Inc.

Pacoima
Ultimat

San Diego
Sabia, Inc.
Sequoia Sciences
Santa Ynez
Pacific Advanced Technology

Tarzana
IRI Computer Communications Corp.

Thousand Oaks
Monopole Research

Torrance
DBC Technology Corp.

Colorado

Centennial
Seakr Engineering, Inc

Connecticut

Danbury
Fuelcell Energy, Inc. (2)

East Hartford
Advanced Fuel Research, Inc.

Florida

Gainesville
New Era Technologies, Inc.
Sarasota
Medical Education Technologies, Inc.

Maryland
Bethesda
Bio-Brite, Inc.

Georgia
Atlanta
Cermet, Inc.

Columbia
Interface & Control Systems, Inc.

Dunwoody
Transfusion and Transplantation Technology

Rockville
Intelligent Automation, Inc.

Illinois
Batavia
Cermet, Inc.

Silver Spring
Simquest International LLC

Dunwoody
Transfusion and Transplantation Technology

Massachusetts
Belmont
Cermet, Inc.

Billerica
Aerodyne Research, Inc.

De Kalb
Psytec Corporation

Cambridge
Crosslink Genetics Corporation

Evanston
MP Technologies, LLC

Charles River Analytics, Inc.

Niles
Microlink

Chelmsford
Triton Systems, Inc.

K. Wetzel & Company
Sensera, Inc.

Lexington
Nascent Technology Corp.

Louisiana
New Orleans
St. Charles Pharmaceuticals

Lowell
Konarka Technologies, Inc.

Freeport
Sea Run Holdings, Inc.

Newton
Giner Electrochemical Systems, LLC

West Falmouth
Benthos, Inc.
Townsend
PFM Manufacturing, Inc.

New Hampshire
Hanover
Creare, Inc.
Manchester
Cryo Industries of America, Inc.

New Jersey
Berkeley Heights
RJM Semiconductor, L.L.C.
South Plainfield
PTC Therapeutics, Inc.

New Mexico
Albuquerque
Intellite Management Sciences, Inc.

New York
Albany
Mohawk Innovative Technology, Inc.
Clifton Park
Simmetrix, Inc.
Dix Hills
Bethpage Technologies, Inc.
Harford
Clear Science Corp.
Lansing
Advanced Design Consulting, Inc.
Middle Island
Heat Wise Inc.
New York
Opticology, Inc.

Schenectady
Solidus Biosciences, Inc.

Setauket
Pixon LLC

Vestal
Soft Sight, Inc.

North Carolina
Charlotte
Flying Bridge Technologies

Raleigh
Geophex Ltd.
Barr-Mullin Inc.

Ohio
Bay Village
Millennia Ceramics, Inc.

Columbus
Weldware, Inc.

Dayton
IAP Research, Inc.
Cornerstone Research Group, Inc.

Dublin
Applied Engineering Solutions, LLC

Oklahoma
Stillwater
Nomadics, Inc. (3)

Pennsylvania
Pittsburgh
Maya Viz

Tennessee
Knoxville
RIS Corp.

Texas
Austin
Xidex Corp.

Houston
Mecom, Inc.
Introgen Therapeutics, Inc.

Sweetwater
Ludlum Measurements, Inc.

Utah
Salt Lake City
Axon Medical Inc

Vermont
Burlington
Healthsim, Inc.

Virginia
Alexandria
Mirus Corp.

Blacksburg
Luna Innovations, Inc. (4)
Techsburg, Inc.

Christiansburg
Nanosonic, Inc.
Fairfax
Cougaar Software, Inc.

Manassas
Airak, Inc.

McLean
Innovative Concepts, Inc.

Reston
Nvis, Inc.

Williamsburg
Tao of Systems Integration, Inc.

Washington

Kennewick
Vista Engineering Technologies, LLC

Vancouver
Microenergy Technologies, Inc.

West Virginia

Triadelphia
Touchstone Research Laboratory, Ltd.
## STTR Program Data - Fiscal Year 2003

### AGENCY OBLIGATIONS

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>EXTRAMURAL BUDGET</th>
<th>STTR BUDGET</th>
<th>DOLLARS OBLIGATED</th>
<th>% OF EXTRAMURAL BUDGET</th>
<th>DEFICIT/SURPLUS</th>
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### STTR AWARD PROFILE - COMMITMENTS

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<th>Minority Disad. Phase I Awards</th>
<th>Phase II Awards</th>
<th>Minority/Disad. Phase II Awards</th>
<th>Total Phase I Dollars Awarded</th>
<th>Minority/Disad. Phase I Dollars Awarded</th>
<th>Total Phase II Dollars Awarded</th>
<th>Minority/Disad. Phase II Dollars Awarded</th>
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<th>Average Amount Phase I Awards ($)</th>
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<th>No. of Research Topics</th>
<th>No. of Phase I Proposals Received</th>
<th>No. of Phase II Proposals Received</th>
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### RESEARCH INSTITUTION PROFILE

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<th>Number of Other Non-Profit</th>
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### STTR Program Data - Fiscal Year 2003

#### COOPERATIVE RESEARCH PROFILE

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<th>DOE</th>
<th>NASA</th>
<th>HHS</th>
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#### PHASE I

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<td>3,092,467</td>
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<td>2,497,748</td>
<td>15,235,425</td>
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<td>TOTAL</td>
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<td><strong>TOTAL DOLLARS OF AWARDS</strong></td>
<td>23,571,414</td>
<td>3,042,167</td>
<td>4,478,140</td>
<td>3,823,354</td>
<td>15,761,152</td>
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<td><strong>DOLLARS TO SMALL BUSINESS</strong></td>
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*FY 2003 dollars obligated include modifications to previous year's awards for DOD ($4,834,099)*