Welcome!

Webinar on USPTO Resources for SBIR/STTR Applicants
What We’ll Cover Today

• Welcome and Introductions
• Overview of the SBIR/STTR Program
• IP and USPTO Basics for SBIR Applicants
• Q&A
America’s Seed Fund
How the U.S. Uses the SBIR Program to Foster Innovation

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Office of Innovation and Technology
Office of Investment & Innovation
Why SBIR Program Was Started in 1982

• Prior to 1982 almost all Federal R&D funding was going to large businesses, government labs, and universities.

• SBIR was designed to force the US Government (USG) to spend a portion of their R&D funding with startups and small businesses working on high-risk, high-impact R&D in areas where other sources of funding were not available.

• Belief that the Nation was missing out on innovative ideas that needed to be matured outside of the universities.

• Not designed to fund minor improvements, late-stage, or productization but for first of a kind or cutting-edge technologies.

• Many projects will not succeed but funding is staged in Phases so that many ideas can be seeded and best funded more fully
Program has Produced Massive Economic Impact

- Created millions of high paying jobs
- Stimulated economic growth in new areas of the country
- ROI of over 20 to 1
- 11 of the 15 top US Biotech firms are SBIR awardees
- Tens of thousands of patents
Why Small Business Loves about SBIR

→ Provides Non-Dilutive Capital
→ Firms maintain Data Rights
→ Funds ideas that others may not
→ Ability to win sole source follow on contracts
Hydronalix produces a line of unmanned vehicles that span from commercial products to military ones.
SBIR and STTR Basics

Small Business Innovation Research (SBIR)
→ 3.2% of the extramural research budget for agencies with a budget greater than $100 M per year
   ~$3.765 billion minimum spent each year

Small Business Technology Transfer (STTR)
→ 0.45% of the extramural research budget for agencies with a budget greater than $1B per year
   ~$518 million minimum spend each year

Over 7,000 new awards every year!
Only Phases I/II use SBIR/STTR $$

Phase 0
PRE

Proposal

PHASE I
(6 – 12 mo.)

PHASE II
(up to 2 years)

PHASE III (Non SBIR/STTR funding)

2nd PHASE II

Product to market

PHASE III

Concept

Prototype

Demos

Product Sales

Phase I: Up to $250,000  Phase II: Up to $1,700,000

The approval process is lengthy and highly competitive
Winning Proposals Must Document and Define the...

• The **significant technical R&D** needed to overcome challenging technical hurdles in the creation of a new capability, product, or service.

• A **unique and defensible technical innovation** that promises to create a durable competitive advantage for the firm.

• A company that is structured and staffed for **aggressive commercialization** of the new product/service.

• A **significant understanding of market and customer** indicating potential to meet an unmet commercial or agency need.
FY 2021 SBIR/STTR Budgets by Agency

<table>
<thead>
<tr>
<th>Agencies</th>
<th>Budget</th>
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<tbody>
<tr>
<td>Department of Defense (DoD)</td>
<td>$2.29 B</td>
</tr>
<tr>
<td>Department of Health and Human Services (HHS)*, including the National</td>
<td>$1.20 B</td>
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<tr>
<td>Institutes of Health (NIH)</td>
<td></td>
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<tr>
<td>Department of Energy (DOE), including Advanced Research Projects Agency</td>
<td>$316 M</td>
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<tr>
<td>– Energy (ARPA-E)</td>
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<tr>
<td>National Science Foundation (NSF)</td>
<td>$224 M</td>
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<tr>
<td>National Aeronautics and Space Administration (NASA)</td>
<td>$169 M</td>
</tr>
<tr>
<td>U.S. Department of Agriculture (USDA)</td>
<td>$32.2 M</td>
</tr>
<tr>
<td>Department of Homeland Security (DHS)**</td>
<td>$15.0 M</td>
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<tr>
<td>Department of Education (ED)</td>
<td>$11.8 M</td>
</tr>
<tr>
<td>Department of Commerce: National Oceanic and Atmospheric Administration</td>
<td>$10.7 M</td>
</tr>
<tr>
<td>(NOAA)</td>
<td></td>
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<tr>
<td>Department of Transportation (DOT)</td>
<td>$6.5 M</td>
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<tr>
<td>Department of Commerce: National Institute of Standards and Technology</td>
<td>$4.6 M</td>
</tr>
<tr>
<td>(NIST)</td>
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<tr>
<td>Environmental Protection Agency (EPA)***</td>
<td>$4.1 M</td>
</tr>
</tbody>
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* Provides grants and contracts  
** Estimated from prior years  
*** Budgeted Amount; other Agencies Obligated Amount

**Total:** $4.282 Billion  
SBIR: $3.765 Billion  
STTR: $518 Million
What’s the difference between SBIR and STTR?

For SBIR percent changes in Phase II to minimum of >50% for Phase II
Which agencies fund SBIR only?

- Agriculture
- Education
- Environmental Protection Agency
- Homeland Security
- National Institute of Standards and Technology
- National Oceanic and Atmospheric Administration
- Transportation
Which agencies fund both SBIR and STTR?

- Defense
- Energy
- Health and Human Services
- National Aeronautics and Space Administration
- National Science Foundation
Start by checking eligibility:

- Company must be for profit, U.S. owned and operated, and under 500 people
- Work must be done in the U.S.
- Focus is on performing R&D – Not purchasing equipment, commercializing a technology that has already been developed, or one that has very low risk and only needs capital

The small business is ALWAYS the applicant and awardee!
Do some topic searches:

And learn which agencies fund different technology areas!

www.sbir.gov/sbirsearch/topic/past
What skills are involved with preparing a SBIR/STTR proposal?

- An innovative concept
- Understanding your agency customer’s needs
- The application of the scientific method to a work plan
- Developing a business case
- Explicitly following an agencies guidelines
- Multiple registrations
- Developing a team and/or partnerships
- Financial preparation
- Time management
What are the elements of an application?

• A technical proposal (called by various names)
• A qualified Principal Investigator (PI)
• Resumes of Key Personnel
• Facilities description
• Budget with cost justifications
• Other documents unique to each agency
What are my chances of winning an award?

- The average award rate for Phase I is 15% across all agencies
- There is variability among agencies
- Both experienced and novice companies apply (40% winners are new to program)
- It takes time to learn how to prepare a winning application
Strengthening the Pipeline: Talent Development Opportunities

- NIH Diversity Supplements (PA-21-345)
- NSF Supplements for Research Experiences (Undergraduates, Veterans)
- NSF Innovative Postdoctoral Entrepreneurial Research Fellowship (I-PERF)
- DOE Phase II Diversity Supplements
- National Cancer Institute Small Business Transition Grant for Early Career Scientists (RFA-CA-21-001)
Building & Connecting an Inclusive Innovation Ecosystem

SBA supports local partners to counsel, mentor, and train small businesses in the innovation ecosystem.

www.sbir.gov/local-assistance
Online Tutorials

55+ Courses including:
→ Agency overviews
→ Program basics
→ Data rights
→ IP protection

www.sbir.gov/tutorials
The United States Patent and Trademark Office (USPTO)
The USPTO is America's innovation agency

• Fostering innovation and economic growth
• Developing and promoting reliable, predictable, and high-quality intellectual property (IP) systems
• The USPTO is an agency of the U.S. Department of Commerce
Types of Intellectual Property (IP)
Historical foundation of intellectual property

Intellectual property (IP) is deeply rooted in our nation’s history.

“The Congress shall have Power ... to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries ... ”

- U.S. CONSTITUTION ARTICLE 1, SECTION 8, CLAUSE 8
Types of intellectual property

- **Patent**: New, inventive ideas
- **Trademark**: Identifies the origin of goods or services
- **Copyright**: Creative expression stored in a tangible form
- **Trade secret**: Any information that is valuable & kept confidential
Developing an IP strategy

• Assess your company’s IP assets and prioritize
• Know your competition
• What’s the pace of innovation and opportunities for growth?
• Determine the best way to protect your IP
• Develop a plan, set goals, and implement
• Get help!
USPTO resources for independent inventors, entrepreneurs, and small businesses

USPTO resources
USPTO Assistance Centers

Inventor Assistance Center
• Provides general information about the patent examination policy and procedure.
• 8:30 a.m. to 8 p.m. ET, Monday through Friday
• (571) 272-1000
• (800) 786-9199 (press 2)
• www.uspto.gov/InventorAssistance

Trademark Assistance Center
• Provides general information about the trademark registration process.
• 8:30 a.m. to 8 p.m. ET, Monday through Friday
• (571) 272-9250
• (800) 786-9199 (press 1)
• www.uspto.gov/TrademarkAssistance
Micro entity status

• 75% off most patent fees

• Low cost submission to establish filing date
  – Provisional application filing fees:
    • $140 small entity
    • $70 micro entity

• Micro entity certifies that he/she:
  – Qualifies as a small entity (less than 500 employees);
  – Has not been named as an inventor on more than four previously filed patent applications;
Filing a patent application on your own

• Pro Se Assistance program provides outreach education to applicants (also known as "pro se" applicants) who file patent applications without the assistance of a registered patent attorney or agent.
  – www.uspto.gov/ProSePatents
  – innovationdevelopment@uspto.gov
  – 866-767-3848
Patent Basics

Patent life cycle

The essentials
- What is a patent?
- Do I need a patent, a trademark, or a copyright?
- What kind of patent do I need?
- How long does it take?
- How much does it cost?
- Do I qualify for reduced fees?

Understand the process
- Patent process step-by-step
- Patent system demystified
- Inventors Assistance Center
- Inventor and entrepreneur resources

Prepare to file
- Seven step patent search strategy
- Application Assistance Unit
- In person help
- Finding a patent attorney
- Filing a patent on my own
- How to conduct a preliminary U.S. patent search (video)

After a patent is granted
- Maintain your patent
- Licensing a patent

For more detailed information on the patent application process, review the USPTO Patent Application Initiative Timeline.

www.uspto.gov/patents/basics
Trademark basics

Trademark registration process

Application > Examination > Publication > Registration

Do you have a name or logo you’re using to advertise your business? You might have a trademark. Learn how to protect it through the federal registration process.

Learning the essentials

> What is a trademark?
> Trademark, patent, or copyright
> Trademark examples
> Scope of protection
> Strong trademarks
> Why register your trademark?
> Online trademark tools

Understanding the process

> Do I need an attorney?
> How long does it take to register?
> Checking status
> Examination of your application
> Approval for publication

Preparing to file

> Why search for similar trademarks?
> Application requirements
> How much does it cost?
> Application filing basis
> Goods and services
> Drawings and specimens

www.uspto.gov/trademarks/basics
Inventor and entrepreneur resources

- The USPTO’s hub for resources and information for inventors, entrepreneurs, and small businesses.

www.uspto.gov/inventors
Find help in your area

• Resources and assistance in your state for filing for a patent or registering a trademark
• Free patent and trademark legal assistance
• Learn to search inventions and trademarks
• Attend events in your region
• Network with inventor and entrepreneur organizations in your state
• Accessible via uspto.gov homepage
  – New to IP? Find help in your area
**USPTO offices**

**USPTO headquarters**
Alexandria, VA

- [www.uspto.gov/EastCoast](http://www.uspto.gov/EastCoast)

**Eastern Regional Outreach Office**
Alexandria, VA
- [www.uspto.gov/EastCoast](http://www.uspto.gov/EastCoast)

**Midwest Regional Office**
Detroit, MI
- [www.uspto.gov/Detroit](http://www.uspto.gov/Detroit)

**Rocky Mountain Regional Office**
Denver, CO
- [www.uspto.gov/Denver](http://www.uspto.gov/Denver)

**Silicon Valley Regional Office**
San Jose, CA
- [www.uspto.gov/SiliconValley](http://www.uspto.gov/SiliconValley)

**Texas Regional Office**
Dallas, TX
- [www.uspto.gov/Dallas](http://www.uspto.gov/Dallas)
Patent and Trademark Resource Centers (PTRCs)

www.uspto.gov/PTRC

Nationwide network of public, state, and academic libraries that are designated by the USPTO to disseminate patent and trademark information and to support intellectual property needs of the public.
Patent Pro Bono Program

This program matches financially underresourced inventors and small businesses with registered patent attorneys.

Learn more about how to apply for patent pro bono assistance:

www.uspto.gov/ProBonoPatents
Law school clinics

- The USPTO’s Law School Clinic Certification Program allows law students enrolled in a participating law school’s clinic program to practice before the USPTO under the guidance of a law school faculty clinic supervisor.

For more information, visit [www.uspto.gov/LawSchoolClinic](http://www.uspto.gov/LawSchoolClinic).
www.uspto.gov/LawSchoolClinic
Startup resources

Assess and protect your IP

Guard your valuable work
You need to know the value of your IP, and how to protect it. If you want to succeed and attract investors, you may even have IP assets you haven’t commercialized.

- Take your IP assessment assessment and get customized training materials
- Protect your IP in the US
- Protect your IP abroad
- Right costs counseled

Develop your business plan

Do your homework
As the saying goes, “If you fail to plan, you are planning to fail.” Take time to explore the wide variety of resources that can help you do your research and set your goals. The Small Business Administration (SBA) and Small Business Development Centers (SBDCs) are there to help you.

- Review the SBA’s 10 steps to start your business
- Get strategic consultation via the SBDCs
- Get advice and training through SBDCs

Secure the investment
There are many sources of startup funding. Intuiting grants, loans, and other forms of investors. Learn more about the Small Business Innovation Research (SBIR) program and other forms of funding.

- Search thousands of federal funding opportunities on Grants.gov
- Find SBIR fund sources from the SBA’s SBDI/STTR site
- See if you qualify for a SBA loan

Find funding

Get advice and assistance
Get advice and assistance with innovation, partnerships, and commercialization of your industry. Learn to navigate the domestic and international IP markets.

- Find USPTO resources for all types of innovators
- Get NAS’s help as you develop new technologies
- Look ahead international filings tools
- Work with USPTO IP attorneys to understand the global market
- Explore IP in five languages

Engage experts

www.uspto.gov/startups
Events

USPTO events for independent inventors, entrepreneurs, and small businesses
IP events for small businesses

• The USPTO provides IP training and outreach to small businesses on a regular basis.

• Join us at an upcoming event or access materials from recent events for free to gain more in-depth knowledge about patents, trademarks, trade secrets, copyrights, commercialization of IP and enforcement of intellectual property rights.

www.uspto.gov/about-us/events
Thank you!

uspto.gov
usptovideo
@uspto
@uspto

www.uspto.gov
Thank You

Questions?