

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY

SBIR/STTR Guide

By New Ventures (NV)

<https://orc.rutgers.edu/startups>

This guide is for faculty, staff and students to present the fundamentals of Small Business Innovation Research (SBIR) and Small Business Technology Transfer Research (STTR) awards. Learn who is eligible, how to apply, how the funding programs are structured as well as resources and tips to enhance the success and impact of your application.



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This document was prepared by NV for background information purposes only. While NV endeavored to present accurate information, we cannot guarantee that this information is 100% correct and up-to-date. NV encourages the reader to pursue independent sources of information regarding this matter before making any related decisions.

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Contents

What are SBIR and STTR Awards?.....	2
Who is eligible?	2
What is different between SBIR and STTR opportunities?	3
Why should I apply?.....	4
Things to Consider before you apply:	4
How to Apply.....	5
New Ventures (NV)	5
Subcontracting with Rutgers.....	6
Letter of Intent Process.....	6
Indirect Costs (F&A Rate).....	Error! Bookmark not defined.
List of Agencies	7
Links to Agency Program Websites (SBIR)	7
Website to Find and Search Opportunities from All Agencies	7
Other Helpful Websites and Documents	7
Two award types: Grants v. Contracts.....	8
Granting Agencies	8
Contracting Agencies	8
Award Payment Schedule	8
Phases of Funding	9
SBIR/STTR Phase Funding	9
Subsequent Phase II award:.....	10
Fast-Track Submission.....	10
Direct-to-Phase-II Program	10
Phase IIB (Post-Phase II Funding).....	10
Starting a Company.....	10
Conflict of Interest and Commitment.....	11
Working part-time during Phase I.....	12
Using Rutgers facilities and equipment	12
Application Tips.....	13
Communicating with the Agency.....	13
7% Profit/Fee Allowance.....	13

Indirect Costs	13
Common Proposal Criticisms	14
General Proposal Evaluation Criteria	14
Additional Funding Opportunities and Programs for Faculty to Consider	14
Phase I Ventures	14
Other Opportunities.....	15

What are SBIR and STTR Awards?

Small Business Innovation Research (SBIR) and Small Business Technology Transfer Research (STTR) grants are U.S. congressionally mandated funds offered independently by participating federal agencies to small businesses. The law requires that federal agencies with large R&D budgets, allocate a percentage of their budget for distribution through SBIR and STTR opportunities. The goal of these opportunities is to engage small businesses in the national R&D arena.

The desired outcomes include the stimulation and commercialization of innovations, solutions to specific federal R&D needs and support of entrepreneurship (and the economic benefits that stem from it).

The awards are offered to small businesses in Phases for research and development activities on topics selected by participating agencies. Typically, a Phase I grant will be in the amount of \$100K-150K for early stage feasibility work. If successful, the project can be eligible for Phase II funding which typically ranges from \$350K-750K for prototype/proof-of-concept development. In all cases, the total amount of funding varies based on individual proposals and across the different agencies. Some companies will receive additional non-SBIR/STTR funding to continue to develop and commercialize their technology in Phase III. The innovations (and their intellectual property rights) developed during federally funded Phases belong to the company and are encouraged to be further developed and commercialized.

Who is eligible?

Generally, small businesses owned and operating in the U.S. are eligible to receive SBIR and STTR funding.

- Be a small business with **500 or fewer employees**
- Be organized **for profit**
- Have its principal place of business in the United States
- Be registered on the SBIR/STTR Company Registry (<http://www.sbir.gov/registration>)
- Be greater than fifty percent (>50%) owned by U.S. citizens or lawfully admitted permanent resident aliens*

In addition:

- For SBIRs, the primary employment of the principal investigator (PI) must be with the small business at the time of the award. Primary employment means that greater than fifty percent (>50%) of the principal investigator's **time** is spent employed by the small business.
 - The requirement is specific to time and not salary or income. In other words, 80% of the PI's salary can be coming from somewhere else, as long as 51% of his time is with the small business that is applying.
 - It is also important to emphasize that the time requirement begins at the time of the award. This means that no one has to quit their jobs until they know that they will be getting funds.
- For SBIRs, the proposing firm must perform at least 2/3rd of the R&D work in Phase I and at least 1/2 in Phase II. The remaining work can be subcontracted.

For details on eligibility, please see the SBA guide available at

https://orc.rutgers.edu/sites/otc.rutgers.edu/files/downloads/elig_size_compliance_guide.pdf

** SBIR (currently Not STTR as of 3/1/2015) funding may be offered to firms that are majority-owned by multiple venture capital operating companies, hedge funds, or private equity firms – so long as no one such firm owns or controls more than 50% of the equity (at least 50% of equity needs to be owned by US citizens or permanent residents). Please see the above link to the detailed eligibility guide for more information. As of July 2014, only the NIH is permitting applications from such companies.*

What is different between SBIR and STTR opportunities?

1. The STTR program requires participation by universities, federally funded research and development centers (FFRDCs), and other non-profit research institutions. SBIR allows, but does not require university/FFRDC participation.
2. Each STTR proposal must be submitted by a team, which includes a small business and at least one research institution. The project must be divided such that the small business performs at least 40% of the work and the research institution(s) performs at least 30% of the work. Either party or a third party may perform the remaining 30% of the work. This translates to a minimum of 40% of the award money must go to the business and a minimum of 30% of the award money must also go to the institution.
3. The small business and its partnering center or institution are required to establish an intellectual property agreement detailing the allocation of intellectual property rights and rights to carry out follow-on research, development or commercialization activities.
4. Unlike the SBIR program, STTR does not require the Principal Investigator (PI) to be primarily employed by the small business. This allows for an academic PI (university research) in partnership with the applying small business.

Note: In both types of awards, the funding is paid from the government agency to the small business. At Rutgers, any academic research will be funded through a Research Agreement established between Rutgers and the small business who successfully received the award.

Why should I apply?

Free and Early - Although competitive (~14.5% success rate across all agencies), SBIR/STTR awards are a source of non-dilutive funding to conduct early stage research that most non-government funding sources would consider too high-risk to invest in. This is NOT a loan and you are not giving away company equity.

- Chance to develop new innovations that your company can commercialize
- Research that is translatable into a product/service that benefits the lives of others (social good)
- Opportunity for entrepreneurship
- Create jobs and expanded financial opportunities
- Control/ownership of new IP stays with the awarded company

Things to Consider before you apply:

- Funding is not a sure thing.
 - In 2010 the average success rate over all the agencies for Phase I SBIR was around 16.6%
 - Phase II awards are not guaranteed. The average rate over all agencies in 2010 was about 55% (total Phase II awards vs. total Phase II proposals)
- Funding is not instant and is not a lump-sum
 - It will take up to 90 Days to receive a final decision on your proposal from most agencies (up to 1 year for NSF and NIH)
 - If selected for an award, the average time in months over all agencies between the phase I proposal deadline and the start of award was 6.6 months in 2010
- The award is for work and research done by the company, not in a professor's lab
 - For SBIRs, the proposing **firm** must perform at least 2/3 of the R&D work in Phase I and at least 1/2 in Phase II in a company-controlled facility.
 - The SBIR PI submitting the proposal must be 51% employed by the company

[Summary of application success rates by agencies](#)

	USDA	DOC	DOD	ED	DOE	HHS	DHS	DOT	EPA	NASA	NSF
Number of Phase I Proposals Received	538	318	12,799	258	1,863	3,927	309	194	504	1,705	2,463
Total Phase I Awards	92	25	2,052	35	268	774	51	17	34	367	431
Phase I Success Rate	17.1%	7.9%	16.0%	13.6%	14.4%	19.7%	16.5%	8.8%	6.7%	21.5%	17.5%
Total Phase I Dollars Awarded (\$K)	8,006	2,323	179,067	3,122	26,853	206,460	5,440	1,688	2,349	36,520	67,172
Average Phase I Award Amount (\$K)	87	93	87	89	100	267	107	99	69	100	156
Number of Phase II Proposals Received	62	37	1,464	47	342	739	30	7	18	335	275
Total Phase II Awards	39	15	1,071	11	112	309	20	9	11	168	80
Phase II Success Rate	62.9%	40.5%	73.2%	23.4%	32.7%	41.8%	66.7%	128.6%	61.1%	50.1%	29.1%
Total Phase II Dollars Awarded (\$K)	14,914	4,621	739,387	2,539	109,652	435,386	17,965	5,799	2,474	59,742	39,033
Average Phase II Award Amount (\$K)	382	308	690	231	979	1,409	898	644	225	356	488

* Based on 2010 SBIR data

How to Apply

SBIR and STTR grants are offered by individual federal agencies. Therefore, there are differences in the application process for different opportunities. In general, the application process starts with identifying a Topic and specific Opportunity that is relevant to your business. Depending on the agency, an Opportunity may be very specific (for example: “Alternative Materials for Tactical Vehicle Wheeled Hubs”) or relatively broad (for example: “Agricultural and Food Safety Biotechnology”). Once you select a topic, you will have to complete any pre-application requirements. These requirements vary depending on the agency and may include steps such as registering a login and password on a submission site. Once completed, follow the specific instructions for completing and submitting an application found in the solicitation. Some agencies may use grants.gov while others may have their own electronic system.

We highly recommend you read the entire solicitation before applying, even if you have applied before. Each agency has its own set of very specific requirements.

If you are a Rutgers researcher or are a startup licensing a Rutgers technology and considering pursuing SBIR/STTR funding, please contact us for our support. We are able to review/edit applications and potentially provide suggested language for key sections.

New Ventures (NV)

Office of Research Commercialization
 2nd Floor – East Wing
 33 Knightsbridge Road
 Piscataway, NJ 08854
<http://orc.rutgers.edu/startups>

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Additional resources available from:

- The New Jersey Small Business Development Centers (NJSBDC) <http://www.njsbdc.com/sbir>
 - NJ based companies who plan to apply, can work directly with Randy Harmon who is a SBIR/STTR expert consultant, free of charge through the support from NJSBDC. Randy can work with you to decide if SBIR/STTR funding would be right for your business, help identify specific funding agencies and Opportunities, and assist with applications from initial draft stage through submission.

Randy G. Harmon

Phone: 908-754-3652

Email: randygharmon@aol.com

Email: rgharmon@njsbdc.com

Website: www.njsbdc.com/scitech

- The U.S. Small Business Administration (SBA) <https://www.sba.gov/content/research-grants-small-businesses>

Subcontracting with Rutgers

Rutgers is a research subcontractor on many SBIR and STTR funded projects each year including those from our startup companies. In cases where you plan to include Rutgers as a subcontractor in your application, you should go through the process of getting a Letter of Intent which you can include in your application.

Letter of Intent Process

The process of obtaining a Letter of Intent from Rutgers begins by contacting the Rutgers Office of Corporate Contracts (OCC). If you are awarded funding through and SBIR/STTR grant, this office will also negotiate and sign the research subcontract. The best contact person at OCC for SBIR/STTR related matters is Tom Zambito.

Contract Manager

Thomas Zambito, J.D.

Phone:(848) 932-4461

Email: tzambito@ored.rutgers.edu

Required to be submitted for review:

- Endorsement Form [[link to PDF](#)]
- Budget

- Rutgers [[link to Excel Sheet](#)]
- Rutgers Biomedical and Health Sciences (RBHS) [[link to Excel Sheet](#)]
- Rutgers-RBHS (Combined) [[link to Excel Sheet](#)]
- Statement of Work
- Funding announcement (BAA/RFP/Solicitation) number

List of Agencies

Topics and specific opportunities are offered by individual federal agencies and change year to year to match the R&D needs and priorities of each offering agency.

Depending on the field in which your small business operates in, you can search relevant agencies to see if there is an opportunity your business would be qualified and interested in pursuing. Below is a list of all 11 agencies currently offering SBIR funding and a link to their SBIR/STTR program's web page.

Links to Agency Program Websites (SBIR)

- Department of Agriculture (**USDA**)- <http://nifa.usda.gov/program/small-business-innovation-research-program-sbir>
- Department of Commerce (**DOC**) – National Institute of Standards and Technology - <http://www.nist.gov/tpo/sbir/>
- Department of Commerce – National Oceanic and Atmospheric Administration - <http://techpartnerships.noaa.gov/SBIR.aspx>
- Department of Defense (**DoD**) - <http://www.acq.osd.mil/osbp/sbir/index.shtml>
- Department of Defense – Air Force - <http://www.afsbirsttr.com/Portal.aspx>
- Department of Defense – Navy - <http://www.navysbir.com/>
- Department of Defense – Army - <http://www.armysbir.army.mil/>
- Department of Education (**ED**) - <http://www2.ed.gov/programs/sbir/index.html>
- Department of Energy (**DoE**) - <http://science.energy.gov/sbir/>
- Department of Health and Human Services (**HHS**)- <https://sbir.nih.gov/>
- Department of Homeland Security (**DHS**) - <https://sbir2.st.dhs.gov/portal/SBIR/>
- Department of Transportation (**DoT**) - <http://www.volpe.dot.gov/work-with-us/small-business-innovation-research>
- Environmental Protection Agency (**EPA**) - <http://www.epa.gov/sbir>
- National Aeronautics and Space Administration (**NASA**) - <http://sbir.gsfc.nasa.gov/>
- National Science Foundation (**NSF**) - <https://www.nsf.gov/eng/iip/sbir/>

Website to Find and Search Opportunities from All Agencies

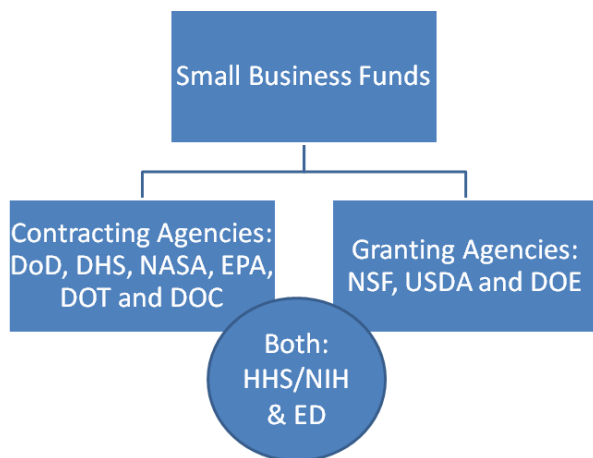
- Small Business Association - <https://www.sbir.gov/> **This website is highly recommended**

Other Helpful Websites and Documents

- Example DoD Phase I Commercialization Plan - <https://orc.rutgers.edu/sites/otc.rutgers.edu/files/downloads/ExamplePhaseIDoDCommercializationPlan.pdf>

- SBA prepared policy directive - https://orc.rutgers.edu/sites/otc.rutgers.edu/files/downloads/sbir_Policy%20Directive.pdf
- DoD SBIR Desk Reference - https://orc.rutgers.edu/sites/otc.rutgers.edu/files/downloads/DoD_SBIR_deskreference.pdf
- NIH Application guide - https://orc.rutgers.edu/sites/otc.rutgers.edu/files/downloads/HHS_SBIR_STTR_Guide.pdf
- NSF Phase I General Guidelines - https://orc.rutgers.edu/sites/otc.rutgers.edu/files/downloads/NSF_Phase_I_General_Conditions.pdf
- Useful Tips - <https://orc.rutgers.edu/sites/otc.rutgers.edu/files/downloads/Tips.pdf>
- NSF PostDoc sample mentoring plan - <https://orc.rutgers.edu/sites/otc.rutgers.edu/files/downloads/RutgersInvestigatorFinDiscForm.pdf>

Two award types: Grants v. Contracts



Granting Agencies

Current granting agencies include: HHS/NIH, NSF, ED, USDA and DOE. In general, these awards are more flexible, pertain to less-specific topics and are investigator initiated. They can be related to more traditional government academic research grants.

Contracting Agencies

Current contracting agencies include: DoD, DHS, HHS/NIH, NASA, ED, EPA, DOT and DOC. In general, contracts are highly focused with a deliverable for the

agency in mind. The agency establishes the plans, protocols, and requirements for the work to be carried out. These contracts provide for a procurement mechanism for DoD and NASA. It is important to note that the contracting agency could become a sustaining customer of your product. Some agencies offer both grants and contracts.

Award Payment Schedule

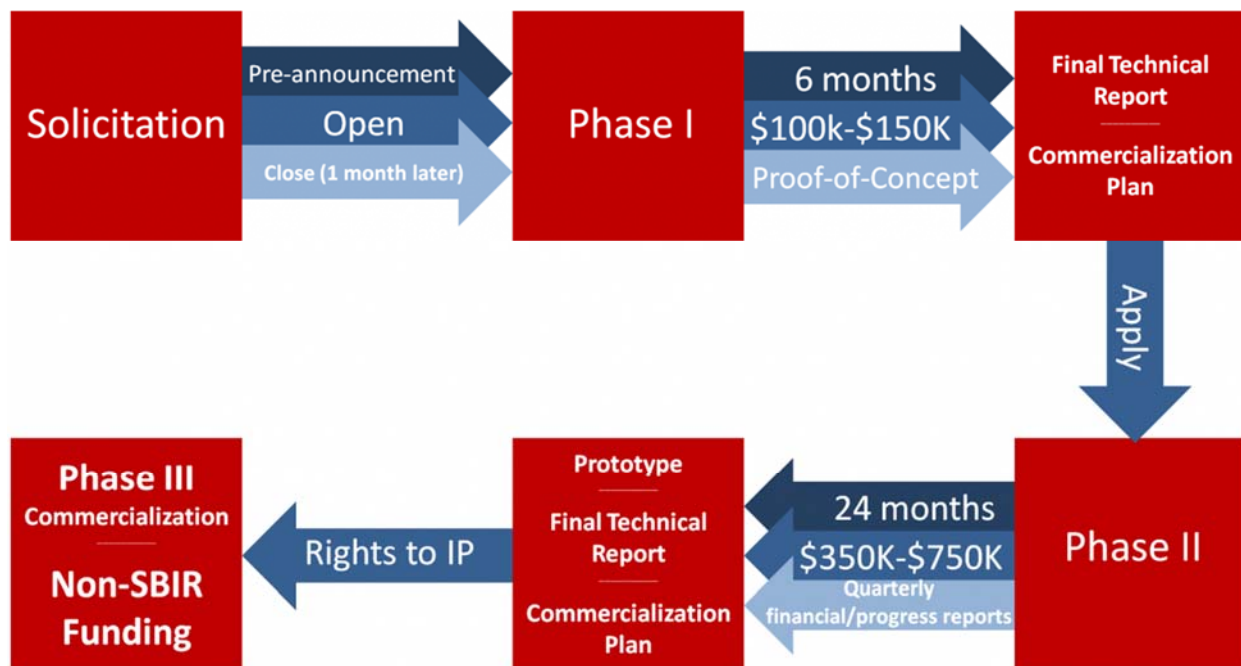
Payment schedules vary depending on the agency and if the award is in the form of a grant or a contract. Contract awards may allow the small business to negotiate payment schedules and define specific required deliverables. Below are examples of the payment schedules of awards from the NSF and the DoD.

Payments will be made by **NSF (Grants)** as follows: “2/3 of the total award will be made within two weeks after receipt of the NSF SBIR Award Request for Initial Payment Form, but not before the award effective date, and the remainder upon receipt and acceptance by NSF of a satisfactory final report and financial certification (included on the SBIR Report Cover Page). The

NSF SBIR Award Request for Initial Payment Form is available at <http://www.nsf.gov/eng/iip/sbir/forms.jsp>. This form should be submitted in accordance with instructions in the award notice.”

Payments will be made by **DoD (Contracts)** as follows: “FAR SubPart 32.111(a)(2) requires that the clause at FAR 52.232-2 be used in fixed-price research and development contracts. This clause clearly provides that the contractor should be paid promptly as portions of the required work are completed. In order to provide for payment for a portion of the work rendered, the work and price must be separately stated in the contract. For firm-fixed-price contracts, this could be accomplished by allowing for periodic payments as status reports are delivered and accepted. Under the firm-fixed-price, level-of-effort term contract, this could be accomplished by allowing for payment based on a composite rate for each hour expended.”

Phases of Funding



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SBIR/STTR Phase Funding

	Award Amount
Phase I	Up to \$150,000 (max* of \$225,000)
Phase II	Up to \$1,000,000 (max* of \$1,500,00)
Phase III	No specified amount

*Any amount >\$150 K for Phase I and \$1 M for Phase II requires an intra-agency waiver to be granted.

Phase III denotes when a SBIR/STTR Phase II or Phase I is offered additional money (not from their SBIR/STTR allocations) to continue, advance or conclude on work described in the Phase I or II award. Phase III is non-competitive and there is no size restriction for the business concern. Phase III funding can come from outside investors.

Also of note, agencies can offer less than \$150 K as a maximum for any particular award solicitation.

Subsequent Phase II award:

- If you receive a Phase I award from one agency you can receive a Phase II from another agency if a written determination is made that the project topic is shared by both agencies
- If you receive a Phase I SBIR or STTR award, you can receive a Phase II award through SBIR or STTR regardless of the type of Phase I award
- The NIH, DoD and DoE can issue a Phase II award to a small business concern who was not provided an award under Phase I

Fast-Track Submission

Fast-Track mechanism expedites the decision and award of SBIR and STTR Phase II funding for scientifically meritorious applications that have a high potential for commercialization. Fast-Track incorporates a submission and review process in which both Phase I and Phase II grant applications are submitted and reviewed together. The Phase I portion of a Fast-Track must specify clear, measurable goals (milestones) that should be achieved prior to initiating Phase II work. In addition, as is required for all Phase II proposals, the Phase II portion of the Fast-Track proposal must present a commercialization plan that addresses specific points.

It is important to note that the Fast-Track application will receive a single rating for the entire proposed project (Phase I & II).

Under the DoD Fast-Track policy, SBIR projects that attract matching funds (cash) from outside investors receive a significantly higher chance of award, as well as continuous funding between Phases I and II.

Direct-to-Phase-II Program

For fiscal years 2012-2017, the NIH, DoD, and Department of Education may issue Phase II SBIR awards to firms to pursue Phase I solicitation topics without requiring the applicant to have received a Phase I award for related work.

Phase IIB (Post-Phase II Funding)

Some agencies, such as the NIH, offer additional funding (up to \$1 million a year for three years) beyond Phase II to help progress technologies through the early FDA regulatory review processes. In most cases, the additional funding is offered as non-dilutive matching funds. For investors, this is a particularly attractive opportunity, for every dollar they invest, two dollars go into the company.

Starting a Company

As mentioned previously, PIs that apply have to be employed by a qualified small business at the time of the award. If you cannot find a small business partner or would prefer, you can start a new company. Below are the basic steps required for a new company to apply for SBIR/STTR funding.

1. Incorporate your company. NJ Fee = \$125 w/ on-line Certificate	http://www.nj.gov/njbusiness/starting/ http://corp.delaware.gov/howtoform.shtml
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Delaware Fee = \$225.00 w/Long Form Certificate	
2. Obtain an employer identification number (EIN) which acts as a Tax ID number and is needed for (SAM)	http://www.irs.gov/Businesses/Small-Businesses-&Self-Employed/Apply-for-an-Employer-Identification-Number-(EIN)-Online
3. Obtain a Dun & Bradstreet number (DUNS)	http://fedgov.dnb.com/webform
4. System for Award Management (SAM) - Register in Central Contracting Registry (CCR) and obtain your Commercial and Government Entity (CAGE*) code and your Trading Partner Identification Number (TPIN)	https://www.sam.gov/portal/SAM/##11 <i>*It can take weeks to obtain a CAGE number because of a required background investigation of yourself and your company</i>
5. Register on the SBIR/STTR Company Registry (print & keep the registry from)	http://www.sbir.gov/registration

*It can take weeks to obtain a CAGE number because of a required background investigation of yourself and your company.

Company checklist before applying:

- ✓ State Certificate of Incorporation
- ✓ A Federal EIN
- ✓ A DUNS number
- ✓ SAM (CAGE code & TPIN)
- ✓ SBIR/STTR Registry from and ID # (need to attach a copy to every solicitation)

Rutgers New Ventures strongly recommends that you consult with a qualified attorney and accountant concerning the founding of a new company. They can advise you on topics such as the type of company to form, the best state to found your company in and other important considerations. If needed, please feel free to contact [us](#) for a list of potential law firms and accounting firms that have worked with Rutgers startups in the past. To learn more about the startup process at Rutgers, please visit <http://orc.rutgers.edu/startups/process>.

Conflict of Interest and Commitment

Please carefully review Rutgers Conflict-of-Interest Policies [60.5.8](#) and [60.5.9](#):

- Conflicts of Interest – Faculty: Professional Activities Outside the University and Outside Employment for Academic Personnel
http://orc.rutgers.edu/sites/otc.rutgers.edu/files/downloads/express_startups/COI_Policy_60_5_8_current.pdf

- Faculty or Staff Involvement with Commercial Enterprise – Contracts with the University
http://orc.rutgers.edu/sites/otc.rutgers.edu/files/downloads/express_startups/COI_Policy_60_5_9_current.pdf

Under these policies, Rutgers faculty members have an obligation to inform the University of any potential conflicts through their department chairs or unit heads and to consult with them to determine whether a conflict of interest actually exists and, if so, what appropriate steps may be required to eliminate the conflict. In some cases (particularly with startup companies), a Rutgers Conflict of Interest Committee may review a matter. Please contact the [New Ventures](#) group for more information.

Important Resources:

- Rutgers Online Disclosure of Financial Conflict of Interest (FCOI) - <http://ecoi.rutgers.edu/>. Faculty and staff should **update their FCOI status immediately and each time it changes**.
- New Jersey Conflict of Interest Law - <http://oirap.rutgers.edu/msa/documents/NJ-Conflicts-of-Interest-Law.pdf>
- NIH Financial Conflict of Interest Tutorial - <http://grants.nih.gov/grants/policy/coi/tutorial2011/fcoi.htm>

Working part-time during Phase I

It is a requirement for SBIR awards that the Principal Investigator (PI) be primarily ($\geq 51\%$) employed by the small business. As such, it is preferred that the PI for the small business applicant not be a Rutgers faculty/employee. If not the case, the PI's Rutgers employment status will have to be re-designated as part-time when the award is granted. It may be possible to become a part-time Rutgers employee and maintain your health and other benefits. Work with your department chair, school dean and university human resources to determine the best course of action.

Using Rutgers facilities and equipment

Pending any conflict of interest review, there are opportunities that would allow a SBIR/STTR awardees to subcontract work and use of equipment in a Rutgers research lab or center. These opportunities are structured as contract requests, which are reviewed and agreed to by Rutgers' Office of Corporate Contracts. Their website and instructions for submitting a proposal can be found at: <http://ored.rutgers.edu/corporate-contracts>.

It is important to emphasize that no Rutgers resources should be used related to a SBIR/STTR award without an approved agreement in place. SBIR/STTR applications will require a statement of work from Rutgers if you plan to use the university as a subcontractor. This process will take time, so reach out to the Corporate Contract Office as soon as possible. As previously mentioned, IDC/F&A is waived for all Phase I SBIR and STTR submissions.

Application Tips

Communicating with the Agency

We highly recommend that you reach out and stay in contact with agencies relevant to your research area and company's topic areas. Key points of contact are the SBIR/STTR program directors at the different agencies and agency branches.

When a solicitation is released:

- Get feedback on your idea (responsiveness, innovation)
- Familiarize the agency with your work and your company (build credibility)
- Have questions answered or clarifications made

Before a release/pre-release:

- Network at conferences and industry days
- Submit ideas and topics to agency
- Direct contact to familiarize them with your work and company

Be sure to include your phone number on any correspondence. Program managers typically prefer you to contact them via email, but they sometimes like to follow-up with you on the phone.

Agencies such as the NSF, recommend that you send them a two page executive summary when reaching out to program directors. Make sure to include the word 'Confidential' on every page's header/footer.

Key aspects to include in the executive summary:

- Company and team - brief descriptions
- Market opportunity, value proposition and potential customers
- An enabling overview of the technology/innovation
- The competition (businesses and products)
- Research outline

7% Profit/Fee Allowance

All agencies allow an awarded company to charge a fee (profit) in their cost proposal in addition to indirect costs (see below). The maximum allowed by most agencies is 7% of the total direct and indirect costs. The allowed amount is usually a point of negotiation between the government contracting officer and the awardee. We recommend that you include the maximum allowed fee in all SBIR/STTR cost proposals.

In preparation for negotiating the profit/fee allowance, we suggest that you familiarize yourself with the Federal Acquisition Regulation [15.404-4](#) . For DoD applications please review Defense Federal Acquisition Regulation [215.404-4](#).

Indirect Costs

Wikipedia – "Indirect costs are costs that are not directly accountable to a cost object (such as a particular project, facility, function or product). Indirect costs may be either fixed or variable. Indirect costs include administration, personnel and security costs".

All businesses incur indirect costs. This fact is well known to SBIR/STTR government contracting officers and they allow businesses to recover some of these costs. It is very important that you include a well calculated indirect cost rate in your proposal. Rates that are too low can lead to the business running into cash flow issues. Rates that are unrealistic will be challenged. Some agencies have defined maximum rates that they will allow. You should familiarize yourself with these maximums and be able to justify in detail the associated costs related to your rate.

A presentation by Edward G. Jameson, CPA on calculating the proper indirect cost rate for SBIR proposals - https://orc.rutgers.edu/sites/otc.rutgers.edu/files/downloads/Indirect_Rate.pdf

Common Proposal Criticisms

- Poorly written and presented
- PI lacks necessary technical expertise
- Insufficient literature review
- Insufficient technical information
- Cannot be completed in six months (Phase I)
- Doubtful economic prospects - Poor commercialization potential
- Failure to indicate where project would go in Phase II
- Inadequate bibliographical information
- Lacks letter(s) from potential industry partners attesting to their interest in the technology
- Research already done by others
- Too vague and unfocused
- Inadequate detail in experimental plan
- Too much research done at the university
- Failure to engage consultants to add expertise in area where PI is glaringly deficient
- Lack of letter(s) from consultants/Letter(s) of support for expertise in lacking areas

General Proposal Evaluation Criteria

Phase I proposals are generally evaluated on the following three criteria:

1. Technical and scientific merit
2. Firm's/team's qualifications. It is important to have the strongest possible PI. Qualifications include not only the ability to perform the research and development but also the ability to commercialize the results.
3. Commercial potential / societal impact of the project and its key innovations

Additional Funding Opportunities and Programs for Faculty to Consider

Phase I Ventures

[Phase I Ventures](#) (P1V) is a program that has been launched in 2015 by the [University City Science Center](#). The program seeks to enroll pre-company university technologies that have potential to attract SBIR/STTR like R&D funding. Once a technology and its PI are admitted into the P1V program, they are matched with a business founder who has industry and startup experience. The team is then provided with up to \$25,000 in cash and in-kind services. Those services include the formation of a new Delaware

corporation, as well as access to consultants and professional grant writers. The team will then put together a very competitive SBIR/STTR application and apply. If successfully funded, P1V can provide office and lab space and contribute up to \$450,000 of direct financing and help you obtain public and private funding. The direct financing is in the form of a dollar-to-dollar match of awarded SBIR/STTR funds.

Other Opportunities

Opportunity	Website
NSF I-Corps	https://www.nsf.gov/news/special_reports/i-corps/ (increases the success of receiving a SBIR Phase I application by up to 60%)
NIH I-Corps	http://grants.nih.gov/grants/guide/pa-files/PAR-14-261.htm
NSF PFI:AIR-TT	https://www.nsf.gov/eng/iip/pfi/air-tt.jsp
QED Proof-of-Concept Program	https://www.sciencecenter.org/programs/qed
Foundation Ventures Capital Group	http://www.foundationventure.com/ (Contact Rutgers NVE to provide you an introduction)
New Jersey Edison Innovation R&D Fund (currently not operating)	http://www.state.nj.us/scitech/entassist/edison/