Small Business Funding Opportunities (SBIR/STTR) for Environmental Technologies at NIEHS SRP, EPA, and NSF

Q&A Session - Unanswered Questions

1. The NSF solicitation says that the PI for an STTR must be employed by the for profit company. This is different from all, or at least most other agencies. Is there a reason for this difference?

This is true for most (if not all) agencies. The SBIR/STTR programs, the submitting entity must be an eligible small business. Hence, the PI submitting the STTR must be employed by the for profit company.

2. I missed the actually meeting, is there a way I can download it and review it later?

Link to archive - http://www.clu-in.org/conf/tio/sbirsttr/resource.cfm

3. How safe are the ideas we present? Do we need a non-disclosure agreement with the agencies?

NIEHS – Yes! All SBIR program staff and reviewers have strict confidentiality agreements in place, and must disclose all conflicts of interest, which prevents them from working with or reviewing any application or grant that is a conflict of interest. Please note, if awarded your grant title and abstract will be made public. For this reason, do not place IP in the title or abstract.

EPA- Yes, all external and internal reviewers must sign a conflict of interest and confidentiality agreement.

NSF- Yes. All reviewers are required to sign a Conflict-of-Interests and Confidentiality Statement. Please review the Forms that Panelists are required to sign. http://www.nsf.gov/eng/iip/sbir/peer_review.jsp \

4. STTRS are partnerships of small business + Research institutions (typically universities). Can the research institution be a federal lab?

Yes

5. "Cheat sheet" just shown is not in the NIEHS_SRP_EPA_NSF_FOs_Webinar_final.pptx that is on the webinar site will it be available on the archived webinar site?

Yes - http://www.clu-in.org/conf/tio/sbirsttr/resource.cfm

6. Does EPA only provide contracts or do they have grants too

EPA has SBIR contracts only.

7. This question is for Prakash Balan (NSF) - If our project fits within several subdivisions of the Chemical and Environmental Technology, should we specify each subdivision in our cover letter? Or do we have to choose one?

NSF (Prakash) : In the presubmission feedback stage, it is not necessary to specify a subtopic in your correspondence with the NSF Program Director. However, for the formal submission of the proposal through Fastlane, the topic/subtopic will need to be specified. Keep in mind that if you make a poor choice on the topic or subtopic, NSF will not reject the proposal on that basis. We will move the proposal to the most appropriate review panel so that the proposal is reviewed based on the research focus of the proposal.

8. How will small startups be evaluated, wherein they may have a great idea, but may not have both exceptional breadth and depth h in both technical and management aspects? Maybe good technical capabilities, but limited management track record?

NIEHS Response: Applications are reviewed based on their own merit and not compared to other applications, so being from a startup does not work against you. It can help a company to have a good track record (this gives reviewers confidence they can complete the work and be successful); but having a good plan for management is good to include for startups without track record. You may consider adding advisors or consultants with the expertise to call upon if you are thin in certain areas.

9. Would any business with a product now entering the market be eligible for an SBIR grant? Does it have to be a technology that solely exists on the drawing board?

If the product is entering market, it is not meant for the SBIR/STTR program, unless substantial R&D is needed to make it commercially viable.

10. We are working on products for suppression and I am wondering who might be the best organization to speak to

NIEHS – I would need to know more about the product, please send Heather an email with a 1-2 page executive summary. The summary should discuss: the company and team; the market opportunity, value proposition, and customers; the technology/innovation; and the competition.

11. We want to use agricultural waste as raw material to remove some pollutants in water; we want to know in what part we will apply for, what kind of program is required for this topic?

More information is needed about the technology; please send an email with a 1-2 page executive summary to an SBIR/STTR Program Directors at EPA and NSF. The summary should discuss: the company and team; the market opportunity, value proposition, and customers; the technology/innovation; and the competition.

12. Which agency would be most appropriate for agricultural biological innovations that reduce/eliminate chemical and nutrient runoff?

Send an email with a 1-2 page executive summary to an SBIR/STTR Program Director at all three agencies: NIEHS, EPA, NSF. The summary should discuss: the company and team; the market opportunity, value proposition, and customers; the technology/innovation; and the competition.

13. To April, is there still an opportunity to suggest a topic for this SBIR round?

EPA – We are always open to new ideas but no guarantee they will be included in a solicitation. As far as timing, this year's topics have already been determined, so it would have to be for next year.

14. What rights does the government have to the technology you develop?

This is best described in the Bayh-Dole Act and by the SBA FAQS http://www.sbir.gov/faq/data-rights.

15. Is the $1.8M award budget for NIEHS for Phase I AND Phase IIs or just Phase I's?

This is both Phase I and II SBIR and STTR for NIEHS SRP. Please note that the general NIEHS SBIR/STTR budget is substantially larger at $14.5M.

16. Have any of the presenters ever considered Phase 0 Assistance to Small Businesses located in highly underutilized areas of the Nation?

We have not heard of this. However, NIH does focus on promoting SBIR and STTR programs in IDeA states.

17. Regarding NSF Proposals: Within the Grant Proposal Guide, NSF requests that International activities such as research, education and training be listed on the cover sheet of the proposal. My question is, is there a limit for how much of the research can be conducted internationally and would international research be detrimental to the proposal's chance for success?

Prakash: For SBIR/STTR no international activities will be supported. All the money has to be spent within the United States.

18. Could you please re-display the chart ~#51(?) that compares the three agencies' programs?

Link to archive - http://www.clu-in.org/conf/tio/sbirsttr/resource.cfm

19. I am an individual with two excellent ideas I would like to pursue, but it seems like all of your proposals need a team.

If a single individual has the wherewithal to be the sole staff person on a grant, there is no rule against it. This not very common and review criteria needs to be considered as a project should have both strong technology and business expertise.

20. In the case of system development proposals aimed at environmental monitoring, should an explicit analysis be included for the environmental impact of the materials and chemistry utilized during device fabrication and testing? (Directed to Heather Henry and April Richards. Thank you)

NIEHS – This sounds like a Life Cycle Analysis question. This is not a requirement. Having LCA to back up claims that a technology is green can be beneficial. Please contact me if you have additional questions – or if I did not quite understand your question. henryh@niehs.nih.gov 919-541-5330

EPA –I agree with Heather's response. We want the small business to have considered the lifecycle impacts of their technology (so that we do not create a new problem while trying to solve an existing one) but do not need a formal analysis, just a thoughtful consideration of the potential impacts.

21. Is any agency (EPA, NIEHS, NSF) accepting application to Phase II without applying previously to Phase I?

NIEHS does have a "Fast Track" whereby a Phase I and Phase II go in at the same time and are reviewed simultaneously. Still, you would then have a Phase I to go onto the Phase II. There is an NIH Direct to Phase II pilot program, but NIEHS is not currently participating.

EPA - No

NSF – No. Only Phase I awardees are eligible to submit a Phase II proposal.

22. Does funding or award have to be paid back over time to EPA or is it kept by the business?

All SBIR and STTR funding, no matter the agency is non-dilutive. You do not pay back the award money.

23. What about phytoremediaton test plots on existing brownfields? Are they eligible for funding?

NIEHS – yes probably, you can send more info to see if it would be responsive and/or competitive. Presumably, the contaminants you are remediating are also found on Superfund sites.

24. Must all research be conducted in the US for NSF grants?

NSF- Yes. All research must be conducted within the United States.

This is true for all SBIR/STTR programs.

25. It doesn't seem like Water Conservation/ Water Recycling technologies is in the list EPA SBIR grants (which is surprising, given its importance). Are there other federal agencies that have SBIRs for water conservation/recycling technologies?

Send an email with a 1-2 page executive summary to the NSF SBIR/STTR Program Director. The summary should discuss: the company and team; the market opportunity, value proposition, and customers; the technology/innovation; and the competition. Also, consider contacting other agencies that fund environmental tech, see slide 44 of the presentation for contact info.

26. Are there sample accepted proposals to look at?

Yes, NIAID has some examples.
http://www.niaid.nih.gov/researchfunding/grant/pages/appsamples.aspx#r43r44

27. Our company has commercialized products developed with assistance of NSF funding. What is the best means of incorporating this into future proposals? E.g. proposal section title…

NSF – Past commercialization history and funding track record can be covered within the proposal in the "Company and Team" section of the proposal.

NIEHS – The biosketches for key personnel include recent or current grants, so the NSF grants would be listed there.

28. Since we are allowed to file equivalent or overlapping proposals to different agencies, what happens if we (enviably) get funded by 2 agencies for an overlapping proposal

NIEHS – after peer review, and if it looks like an application will be funded, there is a negotiation process prior to the time of award whereby any budgetary or scientific overlap is removed from the budget. This must be completed before an award is made.

NSF –You will be required to withdraw all other pending proposals that have overlap with the proposal being considered for award, before NSF can make an award. The Program Director will review your specific situation and provide appropriate guidance.

29. What amount of an award can be spent on capital costs, such as equipment purchases, and in different phases?

NIEHS – capital costs such as equipment required for the project are considered a direct cost. Routine lab equipment would be an indirect cost (ex/ light microscope or centrifuge). The NIH maximum for indirect costs is 40% of direct costs. The maximum total direct cost for Phase I is $150K and Phase II is $1.5M, but other direct costs must be considered in addition to the capital costs (e.g. scientist salaries, consultant fees, research institution costs for STTR, lab supplies, chemicals, or animals that will be directly used for the project). When in doubt, it is best to contact grants management about budgets and direct or indirect costs.

30. We have an in-situ solution that captures, converts and recovers hydro carbon contaminants, such as CREOSOTE, using a bio- enzyme process. Who would be the PEER review for that?

If you specifically want your application to come to the NIEHS, please include a cover letter stating the NIEHS as the intended institute. Optionally, you can also recommend a study section for peer review of your application in the cover letter (Otherwise CSR will select one based on your technology). Here is a link to the NIH Center for Scientific Review (CSR) study section search tool

http://public.csr.nih.gov/StudySections/Pages/default.aspx. Please note, as a small business applicant your applications can only be directed to a small business study section. When searching for a study section, be sure to include "small business" in the search terms, or search just "small business" to see a list of all small business study sections. Again, this is optional.

31. Is NSF Review process the same or similar to DOE's?
NSF – The NSF review process and guidelines tor reviewers are available at this link : http://www.nsf.gov/eng/iip/sbir/review_process.jsp

32. Do you support suppression for wild and grassland fires?
NIEHS does not.

EPA - That is out of the scope of EPA topics. Perhaps USDA?

NSF – All technology development ideas will be considered, even if there is not a specific topic/subtopic listed for what you are proposing.

33. Are SBIR grants independent of each other, can we get/apply for more than one SBIR grant?
NIEHS – You can submit more than one application at a time provided they are very distinct topics.

EPA - You can submit multiple applications, but if they are duplicative, you can only get funding for one.

NSF - An organization may submit no more than two Phase I proposals in total during the cycle, which is defined as the SBIR Phase I solicitation and the concurrent STTR Phase I solicitation. For example, an organization may submit one (1) SBIR Phase I and one (1) STTR Phase I proposal, two (2) SBIR Phase I proposals, or two (2) STTR Phase I proposals during this cycle. **These eligibility constraints will be strictly enforced.** In the event that an organization exceeds this limit, the first two proposals received will be accepted, and the remainder will be returned without review. No exceptions will be made. **The submission of the same project idea to both this SBIR Phase I solicitation and the concurrent STTR Phase I solicitation is strongly discouraged**.

34. Do proposal reviewers for Phase II get to see Phase I final reports?
NIEHS – No. It is incumbent on the applicant to add sufficient Phase I data to the Phase II application to justify additional funding. The reviewers do get to see the summary statement from the Phase I review.

35. For a cost-effective arsenic water treatment solution, which of the funding programs would be the best fit for drinking water solutions? NSF, EPA or NIH?
NIEHS accepts such proposals. Please email a 1-2 page executive summary to the NIEHS SBIR/STTR Program Director. The summary should discuss: the company and team; the market opportunity, value proposition, and customers; the technology/innovation; and the competition.

36. Is there a preference for PIs that have PhDs and extensive publication history? We are interested in an STTR application working with a nonprofit group that has those backgrounds but we in the small business do not have that background, but have been working with the specific technology longer.
NIEHS – Investigator experience is a reviewable element. As long as the PI has the expertise to successfully complete the tasks, then degrees and publications are not as important. If the nonprofit partners' publications give further confidence that the proposal will be successful and/or their angle adds/contributes to the technical novelty/innovation of the product, you may consider having them

collaborate with you. NIH review panels tend to value innovation and the application of fundamental science for SBIR/STTR proposals.

EPA– EPA does not have an STTR Program. PI is not required to be a PhD, but as Heather says, must be qualified to do the work.

NSF - The primary employment of the Principal Investigator (PI) must be with the small business concern at the time of award and for the duration of the award, unless a new PI is named. Primary employment is defined as more than 50% employed by the small business. NSF normally considers a full time workweek to be 40 hours and considers employment elsewhere of greater than 19.6 hours per week to be in conflict with this requirement. As such, the PI must have a legal right to work for the proposing company in the US, as evidenced by citizenship, permanent residency or an appropriate visa. The PI does not need to be associated with an academic institution. There are no PI degree requirements (i.e., the PI does not have to hold a Ph.D. or any other degree). A PI may be primarily employed at another organization at the time of *submission*, as long as he or she is primarily employed at the proposing small business at the time of *award*. A PI must devote a minimum of one calendar month to an SBIR Phase I project

37. Are there SBIR and/or STTR opportunities that are funded by multiple agencies such as the agencies the presenters represent?

NIEHS - I'm not aware of co-funding, but that would likely be for a specific targeted solicitation. Today's presentation focused on "investigator initiated" . Sometimes an agency will fund the Phase I, but the Phase II will be funded by another agency, but this is typically initiated by the grantee, not the agencies themselves.

EPA - No

NSF – The NSF Phase I awards do not have any co-funding options associated with the award.

38. We are interested in applying for an NSF STTR grant, working with a National Lab that employs the research scientists. Our PI has a technology transfer and commercialization background. Is that allowable?

NSF – The PI's qualifications towards executing the proposed R&D work will be an important factor that reviewers will be looking to assess.

39. There is a fine line between R&D and product enhancement. Can you expand on this?

SBIR funding is for innovative R&D, not iterative changes to an existing technology. See slide 6 of the presentation

NSF - Proposed efforts directed toward systems studies; market research; commercial development of existing products or proven concepts; straightforward engineering design for packaging; laboratory evaluations not associated with the research and development process; incremental product or process improvements; evolutionary optimization of existing products; and evolutionary modifications to broaden the scope of an existing product or application are examples of project objectives that are *not* acceptable for NSF SBIR/STTR.

40. Is there a way to find out if someone is already working on a very similar project you want to develop?

NIEHS - On our website we have a searchable database of Who We Fund http://tools.niehs.nih.gov/portfolio/ , and the NIH has the RePORTER tool http://projectreporter.nih.gov/reporter.cfm , which is a compilation of all institute grants. When using either of these tools please note that small business grant numbers begin with the following: R41, R42, R43, R44.

NSF – The NSF awards search webpage would be a good starting point to discover active and expired grants funded by NSF. This will allow you to discover who else is working in your area, who has received NSF funding http://www.nsf.gov/awardsearch/

41. Regarding the comments about reviewer selection: Are there safeguards in place when commercial/industry reviewers are selected that there is no conflict of interest in terms of the commercial reviewer potentially biased against the proposed technology?

NIEHS – Yes! All SBIR program staff and reviewers have strict confidentiality agreements in place, and must disclose all conflicts of interest, which prevents them from working with or reviewing any application or grant that is a conflict of interest.

EPA- Yes, all external and internal reviewers must sign a conflict of interest and confidentiality agreement.

NSF- Yes. All reviewers are required to sign a Conflict-of-Interests and Confidentiality Statement. Please review the Forms that Panelists are required to sign. http://www.nsf.gov/eng/iip/sbir/peer_review.jsp

42. NSF, what is the significance of the PI? Should this person be the team member with the highest level of education, experience, etc?

NIEHS - It should be a more senior member of the team who will be actually conducting the work proposed and has expertise in the topic area.

EPA -The PI is the leader of the project so should have the expertise in the topic area. Should also build a team to cover any other expertise needed to successfully execute the project.

NSF – The PI is the person most suitable to lead and execute the proposed research program in the submitted proposal.

43. Is there financial assistance for fire suppression products in stage two?

NSF – Yes. Phase II funding is available on a competitive basis for Phase I awardees. If you receive a Phase I award, you will have specific deadlines on which you can submit a Phase II proposal.

44. How Intellectual Property of the applicant idea or product is protected during application process?

NIEHS – Yes! All SBIR program staff and reviewers have strict confidentiality agreements in place, and must disclose all conflicts of interest, which prevents them from working with or reviewing any application or grant that is a conflict of interest. Please note, if awarded your grant title and abstract will be made public. For this reason, do not place IP in the title or abstract.

EPA- Yes, all external and internal reviewers must sign a conflict of interest and confidentiality agreement.

NSF- Yes. All reviewers are required to sign a Conflict-of-Interests and Confidentiality Statement. Please review the Forms that Panelists are required to sign. http://www.nsf.gov/eng/iip/sbir/peer_review.jsp

45. Can you offer to be a reviewer if you are currently planning on submitting a proposal?

NIEHS-Yes, but you must state this conflict of interest in advance to ensure you are not reviewer in a study section that is reviewing your application.

46. How does the review process handle proprietary or confidential information that may impact existing patent applications? Are the peer reviewers covered with a CA?

NIEHS – Yes! All SBIR program staff and reviewers have strict confidentiality agreements in place, and must disclose all conflicts of interest, which prevents them from working with or reviewing any application or grant that is a conflict of interest. Please note, if awarded your grant title and abstract will be made public. For this reason, do not place IP in the title or abstract.

EPA- Yes, all external and internal reviewers must sign a conflict of interest and confidentiality agreement.

NSF- Yes. All reviewers are required to sign a Conflict-of-Interests and Confidentiality Statement. Please review the Forms that Panelists are required to sign. http://www.nsf.gov/eng/iip/sbir/peer_review.jsp

47. Can you furnish examples of disruptive technology? what about an enabling platform technology?

NIEHS - On our website we have a searchable database of Who We Fund http://tools.niehs.nih.gov/portfolio/ , and the NIH has the RePORTER tool http://projectreporter.nih.gov/reporter.cfm , which is a compilation of all NIH institute grants. When using either of these tools please note that NIH small business grant numbers begin with the following: R41, R42, R43, R44.

EPA- The term disruptive is used to stress that EPA does not want just incremental improvements to existing technology, we want to try to find technologies with totally new approaches to solving problems. A platform technology is a technology that can potentially be used for multiple applications.

NSF NSF's SBIR program provides non-dilutive funds for early-stage research and development (R&D) at small businesses. This R&D should be based on innovative, transformational technology with potential for substantial commercial and/or societal benefits. The program invites proposals from small businesses across a broad range of science and engineering disciplines. Proposed efforts directed toward systems studies; market research; commercial development of existing products or proven concepts; straightforward engineering design for packaging; laboratory evaluations not associated with the research and development process; incremental product or process improvements; evolutionary optimization of existing products; and evolutionary modifications to broaden the scope of an existing product or application are examples of project objectives that are *not* acceptable for NSF SBIR/STTR

48. If a government shutdown cannot be avoided as a proposal is approved, then will that proposal still be funded?

NIEHS- If an application scores well and it is listed on a funding plan, it will likely be paid when funds are available. However, a government shutdown could delay the receipt of the funds.

49. We have spray technology that can reduce drift and spray to small droplet it can be further R&D in Agriculture and combustion. We already have tested and initial prove of concept with area will fit for us to apply for funding?

NIEHS – Fast Track might be a good option, this is where you submit both a Ph I and Ph II application together. Strong proof of concept data is critical for a successful Fast Track.

EPA -does not currently have a topic in that area. It has been a topic in the past, and could possibly be a topic in future years.

NSF Phase I is intended to help you prove a concept or its technical feasibility. If your project has significant showstoppers remaining to be derisked and overcome, Phase I submission would be potentially pertinent. If not, it may not be a good fit for Phase I.

50. If you are the only employee of a small business and you are applying for Phase 1 SBIR is that a disadvantage (with respect to strength of team, as there is only one person on the team at the time)?

NIEHS - If a single individual has the wherewithal to be the sole staff person on a grant, there is no rule against it. This not very common and review criteria needs to be considered as a project should have both strong technology and business expertise.

NSF- Being the only employee and the PI on a submitted proposal would not in itself be an issue. However, you will need to provide a clear vision and strategy for how you plan on supporting your technical and commercialization plans with the right team.

51. is fire suppression a qualified topic considering the reservation of forest(s) as well as saving property from landslides (a bare hill will wash away with the rain)? Would it be better to go to the SBA in their seeking innovations through their travels or better to apply recommended processes here?

The SBA is a great resource, we encourage that you contact them.

In the meantime, please send an email with a 1-2 page executive summary to the NIEHS SBIR/STTR Program Director. The summary should discuss: the company and team; the market opportunity, value proposition, and customers; the technology/innovation; and the competition. This might be a good fit for the Worker Training Program at NIEHS. The page limits are contained within the application guide http://grants1.nih.gov/grants/funding/424/index.htm

52. Where is the line drawn between advancements to current technologies and new disruptive technologies? Example, I have a patent on hybrid energy harvesting devices, ie. solar and sound/vibration as a new material for energy harvesting, or wind, solar and sound as a new energy harvesting device. Are these examples considered enhancements to existing technologies or potentially disruptive innovative breakthroughs?

Without knowing the specifics, it is hard to make a definitive answer, but it seems to be innovative/disruptive. Please consider sending an email with a 1-2 page executive summary to the EPA, NSF, and NIEHS SBIR/STTR Program Directors. The summary should discuss: the company and team; the market opportunity, value proposition, and customers; the technology/innovation; and the competition.

53. In STTR, could the academic partner be the PI (lead) or is it the corporate partner only that is entitled to being the PI (lead) and the academic a co-PI or co-lead ?

NIEHS - The academic partner can be the PI. Please note, no matter the PI, the award still goes to the small business out of which the small business provides funds to the academic collaborator.

EPA does not have an STTR Program.

NSF- The PI must be an employee of the small business. For STTRs, The primary employment of the Principal Investigator (PI) must be with the small business concern at the time of award and for the duration of the award, unless a new PI is named. Primary employment is defined as more than 50% employed by the small business. NSF normally considers a full time workweek to be 40 hours and considers employment elsewhere of greater than 19.6 hours per week to be in conflict with this requirement. As such, the PI must have a legal right to work for the proposing company in the US, as evidenced by citizenship, permanent residency or an appropriate visa. The PI does not need to be associated with an academic institution. There are no PI degree requirements (i.e., the PI does not have to hold a Ph.D. or any other degree). A PI may be primarily employed at another organization at the time of submission, as long as he or she is primarily employed at the proposing small business at the time of award. A PI must devote a minimum of **two calendar months** to an STTR Phase I project.

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