

## NIEHS Small Business Grants – SBIR (R43, R44) and STTR (R41, R42)

The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs at the National Institute of Environmental Health Sciences (NIEHS) help small businesses develop innovative applications to translate and communicate environmental health research to improve public health. The highly competitive SBIR program encourages domestic small businesses to engage in federal research and development that has the potential for commercialization. Building on the SBIR program, the STTR program includes a requirement for small businesses to formally collaborate with a research institution to bridge the gap between discoveries from basic science research and commercialization of resulting innovations.

### Commercialization of Research Through SBIR and STTR Grants

Human health and disease result from three interactive elements: genetic susceptibility, age, and environment. The mission of NIEHS is to research how the environment affects biological systems across the lifespan and to translate this knowledge to reduce disease and promote human health. NIEHS achieves its mission through a multidisciplinary biomedical research program, prevention and intervention efforts, and a communication strategy that encompasses training, education, and technology transfer and community outreach.

### Sample of NIEHS SBIR/STTR Grants

Exposure Assessment	Alternative Toxicity Testing Models	Superfund Sensors and Monitors	Superfund Remediation Technologies
			
<p>Exposure to air pollution is a leading risk factor for disease and premature death, but measuring personal exposures remains a challenge. The UPAS v2.1 PLUS, developed by Access Sensor Technologies, is a wearable device that combines an air sampler — to collect air pollutants, such as particulate matter, and facilitate downstream analyses of pollutant composition — with low-cost, time-resolved pollutant sensors and a GPS module to provide insight into time and location. Ongoing R&amp;D efforts aim to reduce the cost of this technology and validate the UPAS in exposure assessment applications.</p> <p>R44ES24041 Access Sensor Technologies Fort Collins, Colo. Principal Investigator: Daniel Miller-Lionberg <a href="http://www.accsensors.com">www.accsensors.com</a> <i>(Photo courtesy of Access Sensor Technologies)</i></p>	<p>Routine eye safety testing is required for personal care, cosmetics, and other products for a range of reasons, including labeling, and to meet import/export requirements. There is an unmet need for highly sensitive, accurate, rapid, and reliable nonanimal eye safety tests for the testing of unknown products or chemicals for ocular hazards. Lebrun Labs has developed OptiSafe test kits, which provide accurate, sensitive, reliable results in less than 24 hours and is further finalizing the kitting and presentation of the test for wider availability. This can contribute to the reduction in animal testing and ensure eye area product consumer safety.</p> <p>R44ES025501 and SB1ES025501 Lebrun Labs LLC Anaheim, California Principal Investigator: Stewart Lebrun <a href="http://www.lebrunlabs.com">www.lebrunlabs.com</a> <i>(Photo courtesy of Lebrun Labs)</i></p>	<p>PFAS are persistent chemicals that accumulate in the body and pose significant health risks, but monitoring them at low, environmentally relevant concentrations is challenging. 2Witech Solutions LLC developed a portable device that screens contaminated water for PFAS, offering real-time detection at lower cost than traditional lab tests. Using molecular-imprinting and advanced electrochemical sensors, the analyzer detects PFAS concentrations from 1 to 200 parts per trillion with rapid response and high selectivity, without interference.</p> <p>R43ES035347 2Witech Solutions, LLC Principal Investigator: Qingwu Wang <a href="http://www.2witechsolutions.com">www.2witechsolutions.com</a> <i>(Photo courtesy of 2Witech Solutions)</i></p>	<p>PCBs are a large and complex group of chemicals that can accumulate in the aquatic food web, where they can pose a threat to human health. RemBac Environmental, LLC, developed SediMite, a remediation technology that uses activated carbon pellets containing microorganisms to degrade polychlorinated biphenyls (PCBs) in sediments. The microorganisms break down PCBs by removing chlorine and breaking down biphenyl rings, while the pellets deliver them efficiently across large contaminated areas. This in-situ method enables large-scale remediation, with the pellets storing microbes long-term and promoting their growth during deployment.</p> <p>R44ES032365 RemBac Environmental, LLC Principal Investigator: Craig Bennett Amos <a href="https://bit.ly/3YeDPuc">https://bit.ly/3YeDPuc</a> <i>(Photo courtesy of RemBac Environmental)</i></p>

### The major technology categories the NIEHS small business grant program is currently funding are:

- Exposure assessment tools
- Toxicology screening approaches
- Nanomaterial exposure and response evaluation tools
- Intervention methodologies
- Biomonitoring and biological markers of exposure and response
- Education/outreach tools to support environmental health literacy
- Superfund Research Program – detection and remediation technologies
- Worker Training Program e-learning technologies

## Resources for Small Business Applicants

### NIEHS SBIR/STTR INFORMATION

- **NIEHS Small Business Portal** – How to apply for SBIR and STTR grants, application resources, new funding opportunities, or join our listserv – <https://www.niehs.nih.gov/funding/grants/mechanisms/sbir>
- **NIH Small Business Grants FAQs** – [https://seed.nih.gov/faqs?redirect\\_from=sbir.nih.gov](https://seed.nih.gov/faqs?redirect_from=sbir.nih.gov)
- **SBA Small Business Grants** – General information about SBIR and STTR grants – <https://www.sbir.gov>



### NIEHS Funding Opportunities and Other Support

#### 1. NIH Omnibus for “Unsolicited” SBIR/STTR applications

- SBIR: PA-24-245 (Parent SBIR [R43, R44] Clinical Trial Not Allowed) – <https://grants.nih.gov/grants/guide/pa-files/pa-24-245.html>
- SBIR: PA-24-246 (Parent SBIR [R43, R44] Clinical Trial Required) – <https://grants.nih.gov/grants/guide/pa-files/pa-24-246.html>
- STTR: PA-24-247 (Parent STTR [R41, R42] Clinical Trial Not Allowed) – <https://grants.nih.gov/grants/guide/pa-files/pa-24-247.html>
- STTR: PA-24-248 (Parent STTR [R41, R42] Clinical Trial Required) – <https://grants.nih.gov/grants/guide/pa-files/PA-24-248.html>
- Funding Topics: NIEHS topics begin on page 98 – [https://seed.nih.gov/sites/default/files/HHS\\_Program\\_Descriptions.pdf](https://seed.nih.gov/sites/default/files/HHS_Program_Descriptions.pdf)
- Application due date: Standard due dates January 5, April 5, and September 5.

#### 2. SBIR/STTR Commercialization Readiness Pilot (CRP) Program Technical Assistance

- PAR-23-219 (R44 Clinical Trial Not Allowed) – <https://grants.nih.gov/grants/guide/pa-files/par-23-219.html>
- Application due date: Standard due dates of January 5, April 5, and September 5.

#### 3. NOT-ES-24-002: SBIR and STTR Notice of Special Interest (NOSI): Innovative Technologies for Research on Climate Change and Human Health. This notice applies to PA-24-245, PA-24-246, PA-24-247, and PA-24-248 for due dates January 5, 2025 and April 5, 2025.

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### Information about Superfund SBIR Program:

<https://tools.niehs.nih.gov/srp/programs/index276.cfm>



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### Information about Worker Training SBIR Program:

[https://www.niehs.nih.gov/careers/hazmat/about\\_wetp](https://www.niehs.nih.gov/careers/hazmat/about_wetp)



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