

Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) at the NIEHS

The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs were established by Congress in 1992 to stimulate technological innovation in the private sector, strengthen the role of small businesses in meeting federal research and development needs, increase private-sector commercialization of innovations, and encourage participation by socially and economically disadvantaged small businesses and women-owned businesses.

The NIEHS is a strong supporter of the SBIR/STTR Programs and commits over \$8 million per year to research toward technological advancements for environmental health science research. The NIEHS's areas of interest are published in the NIH omnibus SBIR/STTR solicitation each year. The institute's current emphasis is on the following areas:

Development of products that aid in the development and validation of alternative designs/methods for toxicity testing

- Nonmammalian/invertebrate models
- Cell culture/animal stem cell models
- Molecular fingerprinting using gene expression arrays or proteomics

Development of products/devices for measuring exposure to toxic agents

- Personal monitors (adults and children)
- Identification of products/metabolites/toxic effects useful for screening populations
- Noninvasive imaging techniques to detect toxicants/metabolites/toxic effects

Development and validation of bioengineering technology (including nanotechnology)

- Human breath analysis for metabolic phenotyping
- High-throughput fingerprinting of genetic polymorphisms
- Development of technologies to comonitor daily activity patterns and exposures
- Development of instruments to measure a battery of biomarkers that would quantify exposures to chemical mixtures
- Development of devices that would be useful for real-time biomonitoring of exposures to environmental agents

Development of animal models that mimic human disease

Development of educational materials related to environmental health science

The NIEHS is also currently participating in program announcement PA-00-018, "Innovations in Biomedical Information Science and Technology: SBIR/STTR Initiative," to develop the bioinformatics/analytical models needed to analyze the information generated by the genomic, proteomic, and complex nanotechnology approaches noted above.

For complete details on the SBIR and STTR Programs, application procedures, and deadlines, consult the NIH SBIR/STTR Web site located at <http://grants.nih.gov/grants/funding/sbir.htm> or contact Jerry Heindel, e-mail: heindelj@niehs.nih.gov.