

# SBIR/STTR Programs at NIEHS

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**NIEHS**

## SBIR Program Overview

### Small Business Innovation Research (SBIR)

~~2.5%~~

2.6%

Set-aside program for small business concerns to engage in federal R&D -- with potential for commercialization.

### Small Business Technology Transfer (STTR)

~~0.3%~~

0.35%

Set-aside program to facilitate cooperative R&D between small business concerns and U.S. research institutions -- with potential for commercialization.

# Re-Authorization PL 112-81: Signed 12/31/2011

1. Set aside requirements for Agencies will increase

FY	Set-aside SBIR	Set-aside STTR
2011 (current)	2.5%	0.30%
2012	2.6%	0.35%
2013	2.7%	0.35%
2014	2.8%	0.40%
2015	2.9%	0.40%
2016	3.0%	0.45%
2017	3.2%	0.45%

# Key Re-Authorization Provisions

## 2. Guidelines for Size of Awards

Program	Phase I	Phase II	Current
SBIR	\$150,000	\$1,000,000	150K/1M
STTR	\$150,000	\$1,000,000	100K/750K

## 3. Hard Limits\* on award size to 50% over guidelines

Program	Phase I	Phase II	Current
SBIR	\$225,000	\$1,500,000	Flexible
STTR	\$225,000	\$1,500,000	Flexible

\* Waiver possible for Specific Topics from SBA

# Key Re-Authorization Provisions

## 4. Venture Capital Participation expanded

NIH, DOE, & NSF up to 25% (other agencies 15%) of SBIR funds to SBCs majority owned by multiple VCs, hedge funds, or private equity firms (SBA to set rules). (Previously not allowed)

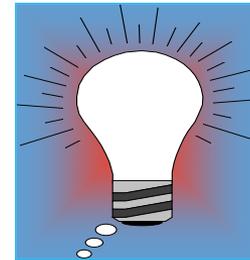
## 5. Administrative Funds from SBIR set-aside for 3 FY (not available previously)

Up to 3% for administration, outreach, management of program

# SBIR/STTR: Three Phase Program

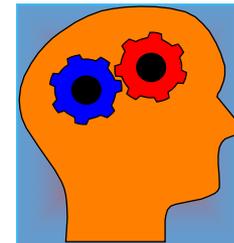
## PHASE I

- ➔ Feasibility Study
- ➔ \$150K and 6- 12 month



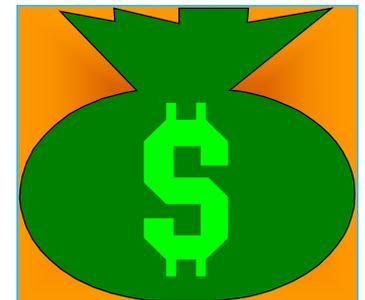
## PHASE II

- ➔ Full Research/R&D
- ➔ \$1 M and 2-year Award



## PHASE III

- ➔ Commercialization Stage
- ➔ Use of non-SBIR/STTR Funds



# NIEHS SBIR/STTR Programs

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- Emphasis is on the development of new and novel approaches using state-of-the-art technologies:
  - **Improved test systems for prioritization and safety**
  - **Technologies for measuring internal dose of environmental agent**
  - **Tools for improved exposure assessment**
  - **Hazardous substances detection and remediation program**

# SBIR/STTR grants

Type	SBIR	STTR	Technology
3D human tissue culture	7	0	Organotypic models for eye, liver, lung, and reproductive tissues
Technology for animal tox studies	5	0	In vitro assay for testing ocular irritants based on porcine cornea. Metabolism assays in zebrafish
Novel assays	9	2	HT assay for nephrotoxicants, human ES cell assay for developmental tox., Pig-A mutation assay, transfected cell lines for CYP expression, Mouse ES stem cell panel for genetic effects in tox screening, CometChip
Sensors	14	0	Wearable devices or benchtop instruments for chemical detection in air, water, and consumer products
Biomonitoring*	3	1	Novel technologies for measuring pesticides, metals, PBDEs, etc. in blood, urine, and saliva
Remediation	4	1	Water purification (As, organic contaminants)

- 3D tissue culture models

- “Validation of an In Vitro Human Airway Model” Patrick Hayden, MatTek Corp.
- “New In Vitro Human Liver Toxicity Bioassay System” Raj Singh, Vivo Biosciences

- Novel Assays

- “Tools to Study Mammalian Mutagenesis” Stephen Dertinger, Litron Laboratories
- “An In Vitro Assay for Screening Chemicals Interacting with the Blood-Brain Barrier”  
Aarti Uzgare, In Vitro Admet Laboratories
- “High Throughput Mitochondrial Nephrotoxicant Assay” Craig Beeson, MitoHealth Inc.
- “Novel HighThroughput Platform for Screening Cytochrome P450 Induction,  
Maria Morano, Originus, Inc.

# FY12 Contracts

- Stratatech Corp. – “3D Skin Model with Enhanced Sensitivity”
  - 96 well format for full thickness human in vitro skin model
  - screen for strong and weak dermal irritants
  - endpoints are cytotoxicity, cytokine release, barrier function
- Agiltron Inc. – “Wide Field Volumetric Imaging of Cornea Injury for Earlier Humane Endpoints in Ocular Safety Tests”
  - OCT imaging technology for DOI measures of ocular irritants
  - Imaging to distinguish slight and moderate irritation

# \*RFA on Biomonitoring Technology

- ES 12-004 Novel Technologies for Rapid and Sensitive Biomonitoring in Humans (SBIR [R43/R44])
- Multi-analyte detection
- Small sample volumes
- Appropriate sensitivity and selectivity
- Complement CDC Biomonitoring efforts with low-cost, point-of-use or benchtop technology

# Beyond the Omnibus Solicitation

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## Institute/Center Research Interests

- **NIH Guide for Grants and Contracts**
  - ❖ **Program Announcements (PAs)**
  - ❖ **Requests for Applications (RFAs)**

**Weekly announcements of new initiatives**

<http://grants.nih.gov/grants/guide/index.html>