

Evaluation of the NIBIB Small Business Programs

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BACKGROUND

The National Institute of Biomedical Imaging and Bioengineering (NIBIB) participates in the federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs, which aim to stimulate technological innovation and commercialization of these innovations by the private sector.

NIBIB contracted with NOVA Research Company (NOVA) to conduct an exploratory assessment of its SBIR and STTR programs. The feasibility study was designed to have two primary components:

- 1) An assessment of commercialization efforts to identify those organizations that were successful in achieving product commercialization; and,
- 2) Case studies of successful commercialization to identify factors that could potentially be used by NIBIB program staff to identify applications with a higher likelihood of success.

This poster describes the methods and findings from the assessment of commercialization efforts.

PURPOSE

- Develop methods and processes to identify the most successful NIBIB SBIR/STTR awardees.
- Assess private-sector commercialization of innovations resulting from the NIBIB SBIR/STTR programs.
- Identify NIBIB SBIR/STTR opportunities to advance program outcomes.

METHODS

PORTFOLIO ANALYSIS

Data for SBIR/STTR projects (activity code=R41, R42, R43, or R44) administered by NIBIB in fiscal years (FY) 2003 to 2014 were retrieved from the NIH Query, View, Report (QVR) system.

NIBIB-administered projects include those funded solely by NIBIB as well as those co-funded by NIBIB and another NIH IC(s). It does not include awards funded by NIBIB but administered by another NIH IC. Supplements were excluded from calculations of numbers of awards; however, funding for supplements was included in funding calculations.

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METHODS (continued)

COMMERCIALIZATION ANALYSIS

Organizations that received at least one Phase II NIBIB SBIR/STTR award (traditional or Fast Track) and at least \$500,000 in SBIR/STTR funding via NIBIB-administered awards in FY2003-2014 were identified. Analysis was conducted of the 75 organizations meeting these criteria.

The component of the commercialization analysis that is presented here focused on technologies being developed with support from NIBIB-administered Phase II SBIR/STTR grants. Progress toward commercialization following the Phase II award was assessed. A product/technology was considered to have successfully undergone commercialization if it was available for sale, freely distributed (e.g., software), or licensed for use by others. Indicators of precommercialization include patent publication, subsequent NIH funding, clinical trials, and partnerships with researchers/organizations from outside the funded organization. The primary source for sale/use and licensing was company websites. Primary sources for these indicators included company websites, Google Patent, United States Patent and Trademark Office database, NIH RePORTER, and clinicaltrials.gov.



LIMITATIONS

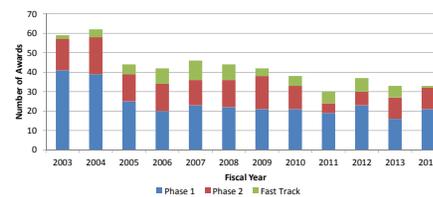
Commercialization analysis was conducted primarily through searches of company websites and other web-based resources. The primary source and time frame for some data could not be confirmed. In addition, results are limited to information that is publicly available. Some companies, particularly those that are not involved in direct-to-consumer sales, may not provide comprehensive information about commercialization progress on their websites.

It was sometimes difficult to determine whether commercialized products or precommercial activities stemmed directly from the Phase II award. This was particularly true for projects of organizations working on several closely related projects.

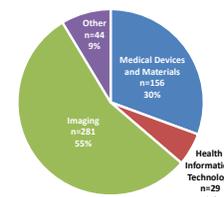
PORTFOLIO ANALYSIS FINDINGS

Since 2003, NIBIB has spent approximately \$135 million on SBIR/STTR projects. NIBIB SBIR/STTR awards are shown by fiscal year, award type, and scientific area.

Number Awards by Award Type



Awards by Scientific Area

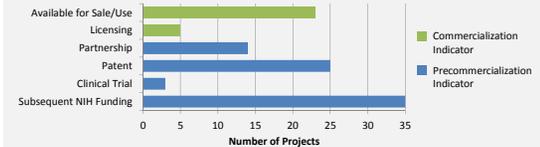


Source: QVR; Supplements excluded from number of awards; Type 6 & 7 excluded from number of awards if another award for same FY

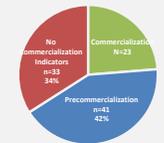
PRELIMINARY COMMERCIALIZATION FINDINGS

A total of 75 organizations were identified. These organizations conducted 97 distinct NIBIB-administered Phase II SBIR/STTR projects in FY2003-2014. Most organizations received only one NIBIB Phase II award (n=65), with smaller numbers of organizations receiving two (n=5), three (n=3), four (n=1), or nine (n=1) NIBIB Phase II awards.

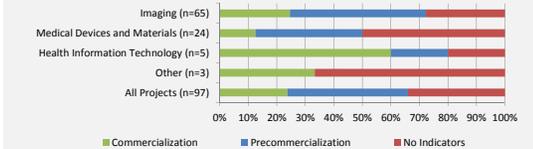
Evidence of Commercialization of Products/Technologies Supported by NIBIB SBIR/STTR Projects, FY2003-2014 (N=97 Projects)



Commercialization of Products/Technologies Supported by NIBIB SBIR/STTR Projects, FY2003-2014



Commercialization of Products/Technologies That Received SBIR/STTR Phase II Funding from NIBIB in FY2003-2014 by Scientific Area



DISCUSSION AND NEXT STEPS

During the initial phase of this ongoing evaluation, 23 companies have been identified as having successfully commercialized NIBIB Phase II products. Another 41 achieved precommercialization success with their product by partnering with another company, patenting their product, conducting a clinical trial, or obtaining additional NIH funding for the product or a product. Of the three main NIBIB scientific areas—Imaging, Medical Devices and Materials, and Health Information Technology—the highest rate of commercialization occurred in Health Information Technology, followed by Imaging, and then by Medical Devices and Materials.

For the next phase of the evaluation, a subset of organizations of varying sizes and representing different scientific areas will be selected for in-depth case studies. This will involve interviews with key organization staff with the goal of identifying best practices that correlate with commercialization success.