



U. S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health



Larta  
Institute

National Institutes of Health Commercialization Assistance Program  
(NIH-CAP)

**NIH-CAP**  
**Year 1**  
**July 2004- June 2005**

**First Progress Tracking**  
**Report**  
**December 2005**

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## Background

The first year of the NIH Commercialization Assistance Program (NIH CAP) for NIH SBIR Phase II grantees was launched in July 2004. 114 companies completed the program in June 2005. At the end of the program participants were asked to provide feedback focused on the usefulness of the program. Their feedback is summarized here to give the reader some background information. Key conclusions were:

- ✓ 85% of evaluation respondents said that the program was well worth their time and effort, and that they are better equipped with management tools to successfully commercialize their technologies
- ✓ NIH CAP already had a major or a valuable impact at the end of the program on 75% of participating companies. Many have already engaged in serious discussions with investors or strategic partners.
- ✓ 88% of respondents would recommend the program to others.
- ✓ Response rate for evaluation was a very high 75%

and comments:

- The program gave me enough exposure to the business way of thinking and an understanding of what needs to be in a presentation so that I am now acting more like a CEO than a scientist. “
- Although we were very comfortable with our technology and overall potential market, we had been struggling with how best to penetrate the market and what strategies would work best, what potential problems to avoid. Our advisor did an excellent job of guiding us just enough to point us in the right direction. “
- We’ve been persuaded to out-license programs not central to our ... strategy. This move will reduce our costs, increase our revenues, and sharpen our focus. As a result, our company is stronger.”
- The program was very helpful in getting our company focused on presenting our technology more clearly and effectively.”
- Going through the NIH-CAP process was a key element in our strategic planning. It enabled us to detail how we could further push our science out into consumer health markets, and how we could raise money to make that happen.”

The Progress Tracking Report, which follows, is focused on assessing companies’ progress with commercialization. It is the first report of a series that will track companies’ progress for 18 months, as required by Larta’s contract with NIH.

## Introduction

Tracking the progress of technology commercialization is a difficult task due to the complexities of the process and long time frames, and there are no widely accepted standard ways of doing it. Larta has developed a new methodology for this purpose and has created a Program Tracking Form shown in the Appendix. Several features of the form are worth noting, as follows:

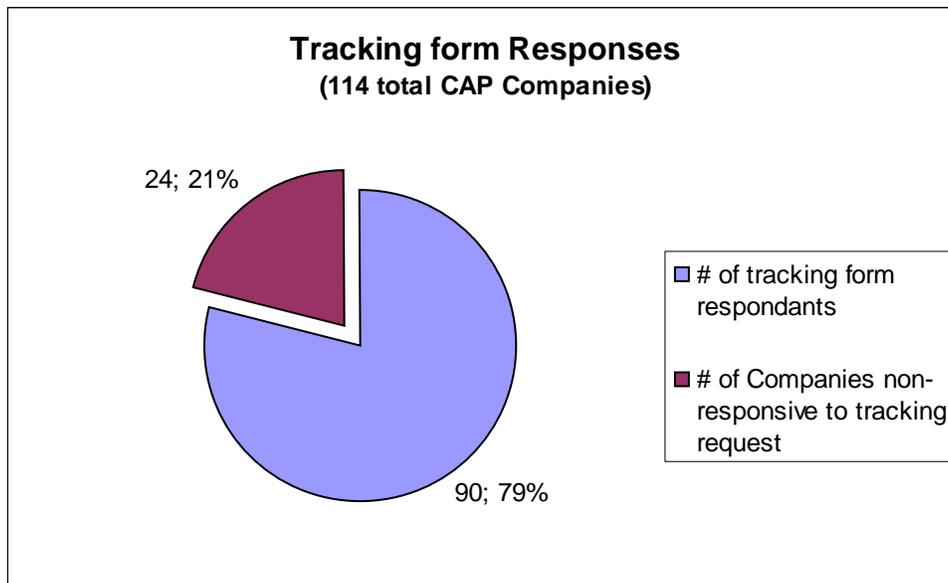
- Tracking is focused on quantifiable end results, i.e., deals, revenue growth, increased equity investment, increased employment, M&A outcomes.
- In addition, the form defined a “deal activity pipeline”. We hope that this attempt at quantifying complex and often circuitous commercialization efforts will provide some predictive capabilities in the future, somewhat analogous to sales pipeline forecasting.
- Participants were asked to report separately their overall commercialization progress and their evaluation of the CAP impact. Data on companies’ commercialization progress are in principle objective and could be used in the studies of SBIR program performance in

general; their use in evaluating CAP itself is limited due to the lack of a control group of SBIR companies.

- Data on the CAP impact are indicative of CAP significance. However, they are subjective estimates and cannot be relied upon for longer tracking periods.

Participants were encouraged to provide additional comments. We hope that this will provide new insights into the technology commercialization process by emerging companies.

In August 2005, a Commercialization Progress tracking form request was sent to all 114 CAP companies requesting information on their progress during the period September 2004 to June 2005, the duration of the CAP, to serve as an assessment of progress during the program and to serve as a baseline for comparison with future tracking inputs. The response was slow and for a handful of companies, four reminders were sent. Finally, as of December 12, 2005, 90 companies turned in responses to the requested tracking form, as shown below. Providing tracking data clearly required some effort from the companies and they were not strongly motivated, which is perhaps not surprising. However, after some prodding from NIH and Larta to obtain the data, in the end an encouraging 79% of companies did respond.



Three non-responsive companies requested a withdrawal from further tracking:

- [REDACTED] — Company maintains that they have not completed the program
- [REDACTED] — Company dissolved as a consequence of the death of the founder
- [REDACTED] — Company not pursuing commercialization any further

This report presents only a summary of the data. Detailed source data can be found in a separate excel file (Processed Tracking 2004 (Sep-June) final.xls). We discuss first the overall commercialization progress, and then separately evaluate direct CAP impact.

## Commercialization Progress

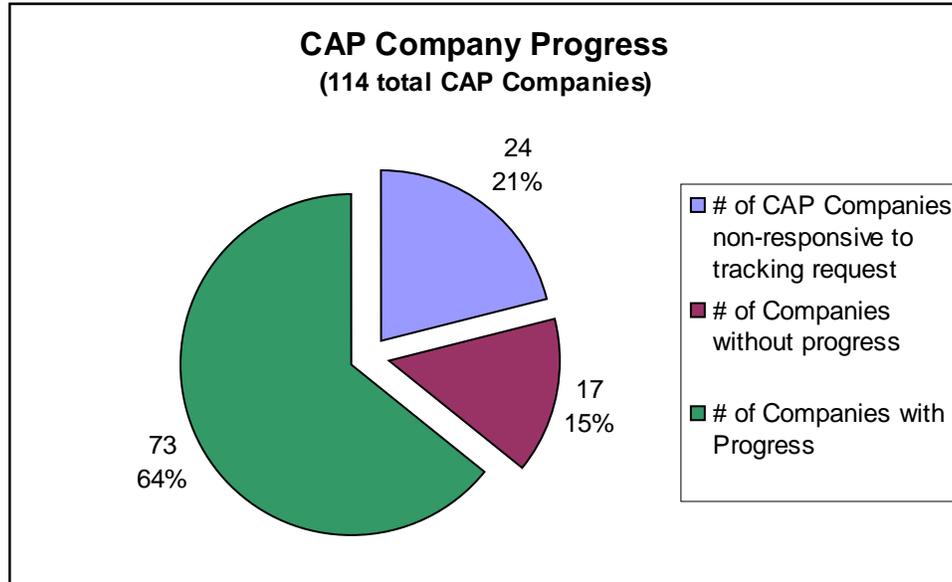
The following charts describe the progress with the commercialization of SBIR Phase II technologies that the companies have made during this CAP period. Progress is determined by a positive change in the following categories:

- Activity in Partnerships and Financing Deals

- Growth of Revenue
- Growth of Equity Investment
- Growth of Employment
- Acquisitions

**Activity in Partnerships and Financing Deals**

73 companies or 64% of all participants showed commercialization progress as shown in the graph below.



“Progress” is defined as at least one event in at least one commercialization category shown below.

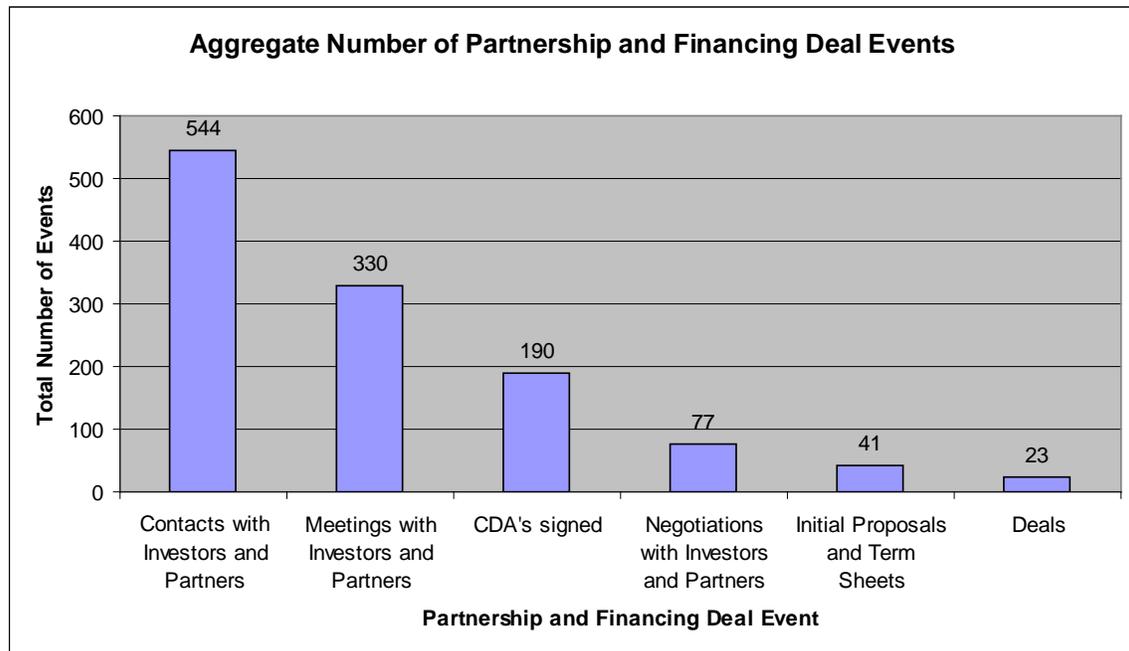


Key observations:

- 16 companies have signed new deals within the CAP period

- The pipeline of investment or partnership activities is full. This bodes well for the outlook for future deals!

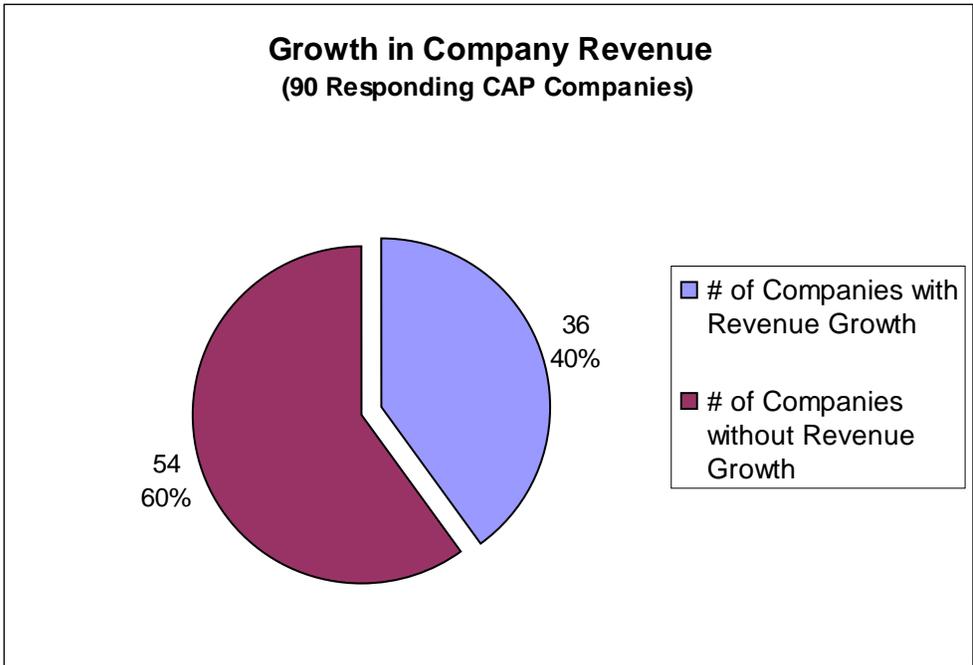
Note that many companies have had more than one event in more than one category. The aggregate intensity of events is shown below.



### **Growth in Revenue**

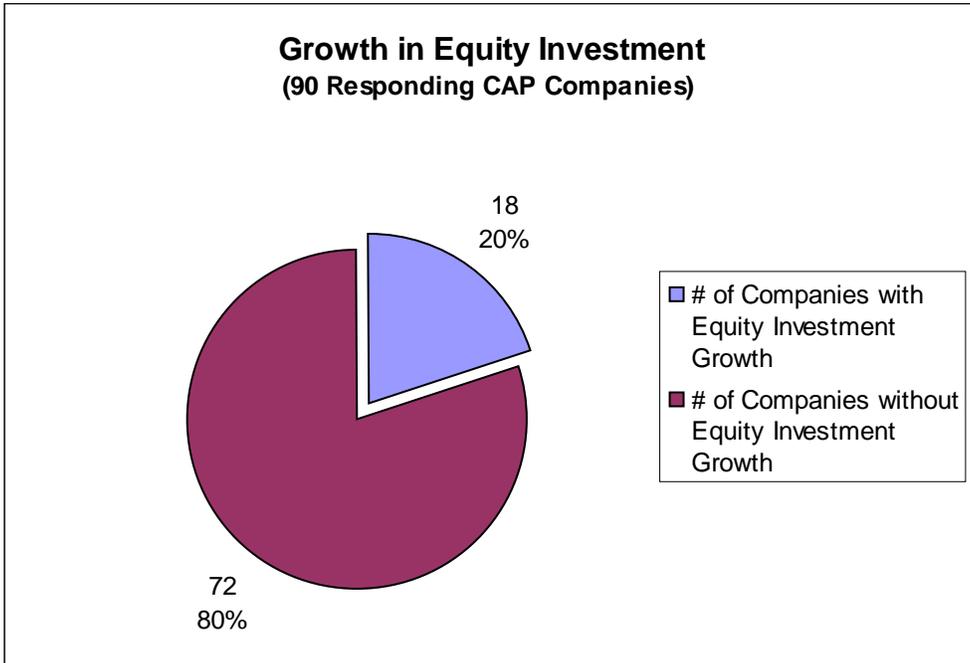
Note that the growth in revenue refers to the change in total company revenue rather than the revenue based on the CAP technology. This approach was taken in anticipation of the reluctance of companies to provide detailed revenue data. In the event, the reporting did turn out to be inconsistent or incomplete. Consequently, the amount for the aggregate increase in revenue is not available but the following observations can be made:

- 36 companies (40% of responding companies) have shown revenue growth
- 19 companies reported revenue increases of more than \$100,000
- 11 companies reported more than \$500,000 increase
- The highest revenue growth reported was \$3.7 million



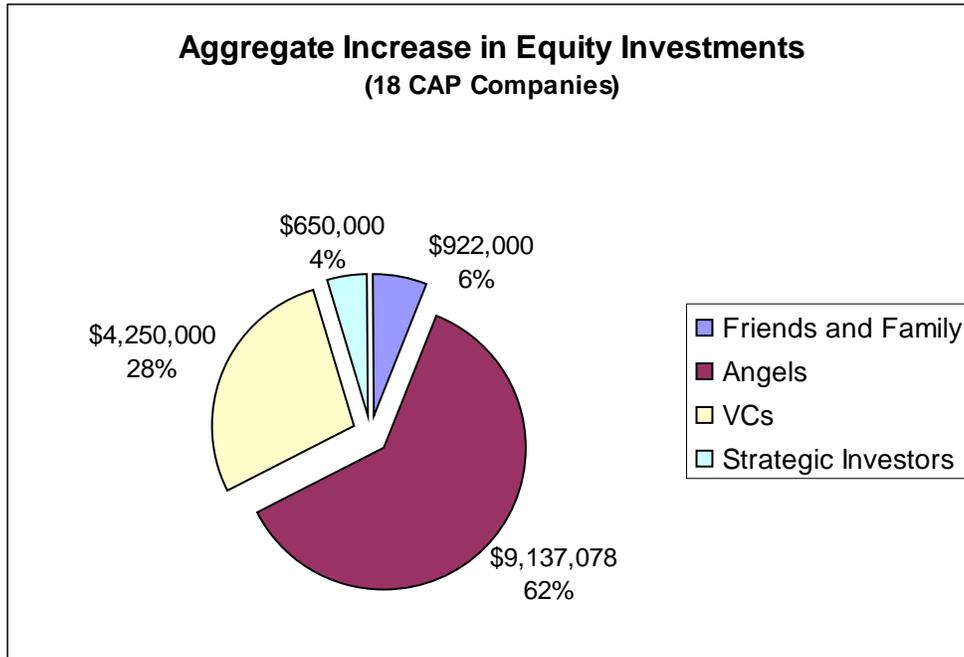
**Growth in Equity Funding**

The data, of course, refer to the growth of the equity funding for the company as a whole. 18 companies (20%) have reported an increase in equity funding as shown below.



All in all, participants reported a total increase in equity investments of nearly \$15 million. The bulk of funding went to three companies—[REDACTED]—and CAP was instrumental for one of them.

The breakdown of investments by sources is shown in the graph below. Most funding (62%) was provided by Angels, following general financial industry trends, and by early stage VC firms (28%).



**Other Success Indicators**

- Aggregate increase in employees: 79
- Acquisition: [REDACTED]

## CAP Impact

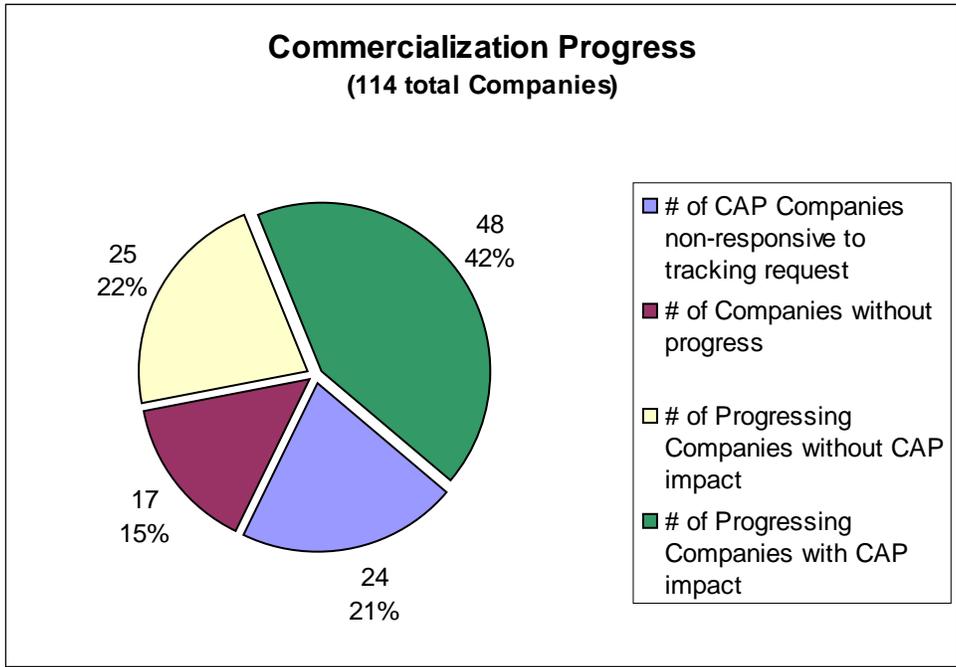
CAP Impact was rated by the companies on a scale of 1 to 5, where the lowest rating 1= would have happened irrespective of the CAP and the highest rating 5= would not have happened without the CAP. As in the previous section, we are evaluating the CAP impact separately on the following commercialization categories:

- Activity in Partnerships and Financing Deals
- Growth of Revenue
- Growth of Equity Investment

Note that the data here represent companies' subjective assessments on the impact of CAP on specific commercialization outcomes. Companies have separately rated very highly the overall CAP impact on their commercialization capabilities, as discussed in the Background.

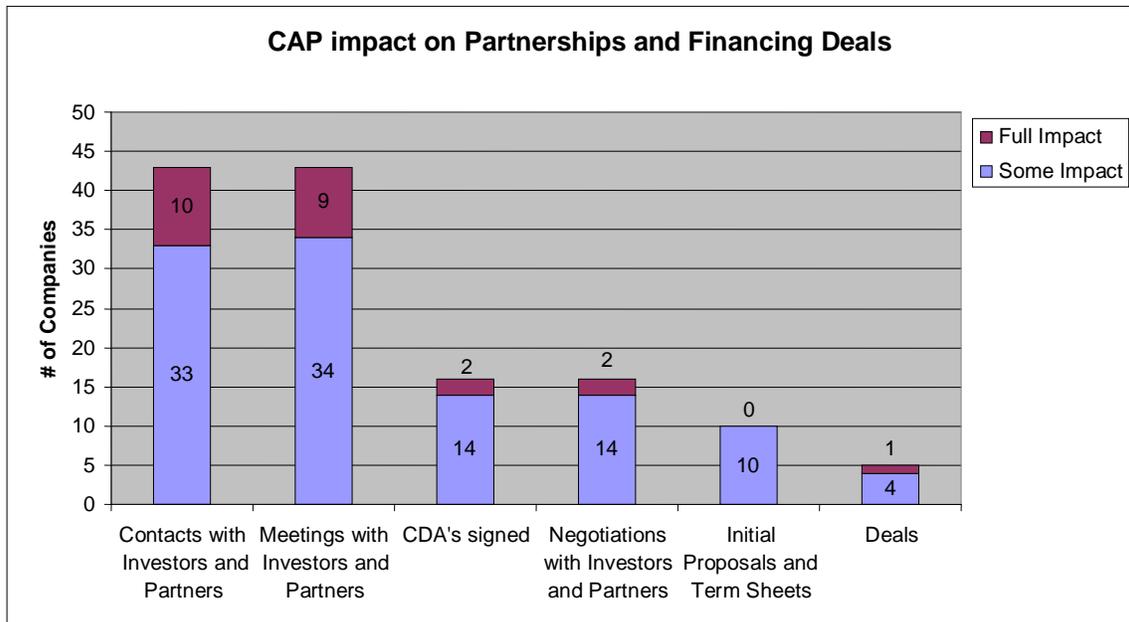
**Activity in Partnerships and Financing Deals**

As can be seen on the graph below, 48 companies or 42% of all participants declared that the CAP program had a positive impact on their commercialization progress.



The details of progress for those companies are shown in the next graph. Impact ratings were condensed for clarity into two categories;

- Full Impact: progress would not have happened without the CAP
- Some Impact (Ranking of 2 to 4)



The above chart shows the number of CAP companies that found the CAP to have an impact on their partnerships and financing deals. 43 companies rated the CAP to have an impact on both their contacts and meetings with investors and partners.

- 5 have signed deals due to CAP impact
- [REDACTED] fully credits the CAP for their \$2 million deal

- CAP has had a significant impact on all phases of commercialization activities!

Comments from CAP participants regarding CAP impact on Partnerships and Financing Deals are shown below.

“CAP has expanded my view, in a positive way, of how to approach such activities. This is much better than on the job training and has, in my view, prevented some potentially serious mistakes that could have occurred. This alone, is worth more than the price of the program. Although CAP cannot be all things to all companies, it does a great job in getting everyone on the same page: to know what is expected of a small company in the current investment climate. Most other companies that I met at the CAP meetings did not have a clue about business, and this was surprising to me. On the other side, since my company is a little further down the road, the needs for specialized counseling are much greater and much more challenging.”

“NIH-CAP gave me a net-working opportunity with NIH-CAP participants. I met [REDACTED] who is a business manager at [REDACTED] at the NIH-CAP meeting last May at Los Angeles. He presented newly developed DNA polymerases at the meeting. I visited the company last June and we are collaborating with them to develop a DNA damage analysis kit for a blood test. I met [REDACTED] at the meeting who introduced and invited me to [REDACTED]. This is a network of businessmen and businesswomen to promote interaction among members. I met [REDACTED] who is a president at [REDACTED]. This company develops portable diagnostic devices. He was interested in developing portable diagnostic devices using diagnoses developed at [REDACTED].”

“By far, the strongest impact of CAP on our progress was acquiring the skills in presenting our business to potential partners and investors.”

“I learned a great deal during the CAP meeting. As a physician, I was introduced to new terminology in the investment business world as Term sheet, value of having a VC investment in a small business technology for future negotiation with larger companies. It would have been very difficult for me to understand the VC investment value and benefit without the help of CAP and my advisor [REDACTED]. Especially with common negative comments we hear about VC.”

“We had quite a few groups like our technology, but only one group was still willing to talk to us after they found we were in the middle of the country. The groups from CAP only wanted deals in their backyard. However, the tools we gained during the program have enabled us to begin talking to the few in-state angels that exist and the marketing plan has laid-out the framework for increasing sales.”

“The CAP program has had an impact on several important aspects of our business. One in particular relates to our pursuit of funding from the [REDACTED] to continue researching RFID and integrating with our infection control surveillance software...I used the templates that I received from the CAP and also my presentation that I did in the CAP to create these. This was extremely helpful... and have been recommended for funding.”

“While we made numerous contacts on our own, the group that will most likely fund us was found at one of the CAP meetings. The presentation and preparation done with CAP were instrumental in helping us to fine tune our "story" and thus in attracting other firms and investor groups. We have made this progress since September 2005, and are preparing to sign a term sheet any day.”

Some companies found the CAP to be helpful, but believe it is still too early to show this impact in concrete terms:

“The impact of the CAP on partnering and financing deals was mainly in the area of facilitating contacts, primarily through the Venture Forum (May 25-6, 2005). However, the impact was limited due to the early stage of our CAP-related technology.”

"For the period up to June 2005, the CAP program was used to determine future direction of new product idea. The main goal of the program was to develop a plan of attack for the period beyond June 05, so no partnership / financing deals were sought during this period."

"Note that the number of contacts was not markedly affected by our participation in the NIH CAP program as we have been engaged in these approaches for some time through our founder's network and that of a hired consultant. However, the quality of our approaches to these audiences was very positively affected by our NIH CAP participation. The receptivity of partners and investors to the technology and the business case is markedly improved since we received the guidance and feedback from NIH CAP staff..."

"Please note that while it looks pessimistic (no outside investors having stepped up to the plate), we are still trying. This may take another year or more, but we still think the CAP was worth it and we are continuing to use what we have learned."

Some companies were quite advanced to begin with and CAP was less influential:

"██████████ is dependent on investor in ██████████ or people connected in some way with ██████████. We have been unsuccessful in attracting professional investors from the "██████████". We were hoping LARTA would help with this. I believe we were too far into development and financing to attract the "start-up" capital that was represented at the LARTA events."

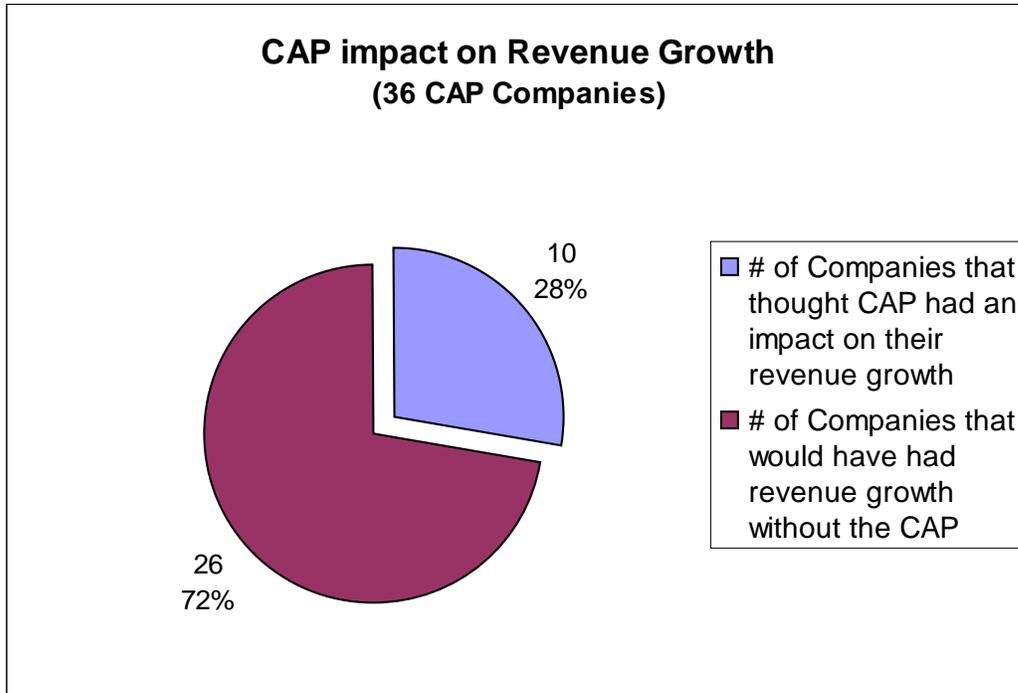
"Our CAP-related program activities consisted mainly of high-level strategic formulation of business plan. Contacts with investors and partners were made independently by ██████████ before or during the CAP period."

And some companies didn't find the help they needed:

"At the CAP Investor Workshop in February 2004 I presented to selected investors, of which one investor followed up on the spot with a more in-depth conversation. However, after that meeting...I was never able to get any response at all. I suggest that CAP make it an absolute condition for participation by investors that all investors must return communications from CAP participants, even if it is a simple "Sorry, not interested". To get no response whatsoever is insulting to CAP presenters who have invested time and effort in the presentation and the program."

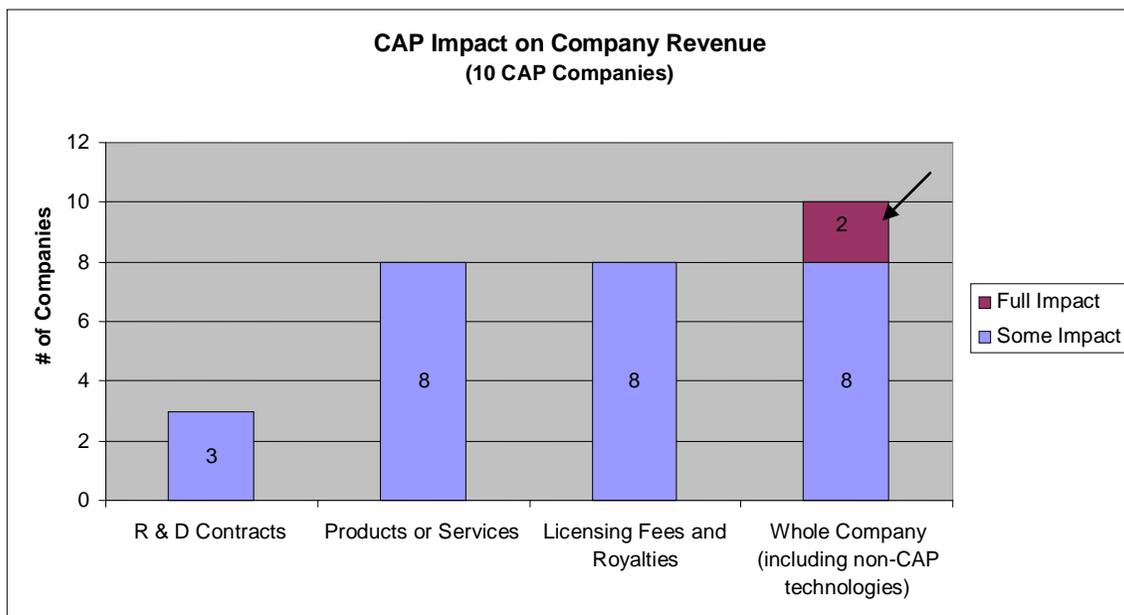
"Our primary interest in the LARTA CAP program related to their representation that they were well connected with a specific company in which we were interested as a potential partner/investor. We participated in the program primarily because of their highly touted venture forum. In the final analysis, LARTA failed to bring the company of interest to the venture forum, in spite of the fact that they told us repeatedly that the company would be participating. In addition, we provided LARTA, at the request of our advisor, with a list of other companies which might be potential partners as well...None of these companies participated..."

**Growth in Revenue**



The above chart shows the impact that CAP had on the Company's revenue growth. Note that some companies commented that it is still too early to assess the CAP impact on revenue.

The details of revenue growth for those companies that did feel impact is shown below.



10 companies rated the CAP to have an impact on their revenue growth via R & D Contract, Products or Services, Licensing fees and Royalty, and the whole company at large. [REDACTED] found the CAP to have a full impact on their revenue growth of the whole company, including non-CAP technologies.

For most of the companies it was too early to see an impact of the CAP on revenues as shown in the following comments:

“CAP has definitely helped me to formulate...need a revenue stream to support our research and development efforts to bring a novel therapeutic to the market...our new thinking is that one needs to work with a partner (like a large pharma company) to build trust and interest in our approach. This, I hope, will lead to licensing which will further support and accelerate R&D efforts...”

“No product revenue has been obtained yet on the CAP related technology (Biomimetic Coatings), therefore the above impacts were all rated N/A. We are continuing our testing and development of this coating, and expect product and license revenues in the future once more clinical data is obtained demonstrating its clear advantages.”

“Revenue-generating activities and relationships take a long time to develop, and at [REDACTED] were in place well before the CAP program period. The average length of time from initial meeting to final agreement for a corporate partnership or R&D contract is estimated to be 12-18 months.”

“We are not yet at a point of producing revenue.”

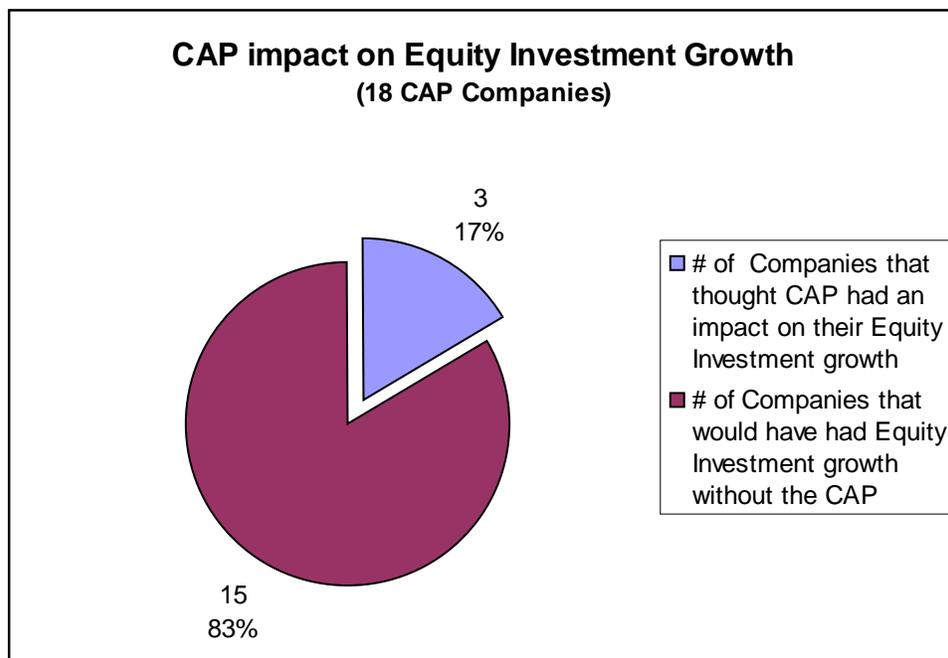
“Our revenue growth in the period indicated occurred irrespective of NIH CAP assistance. We have chosen strategically not to make our NIH-funded technology innovation part of our marketing and sales initiatives as of yet. We plan to do so once we have suggestive pre-clinical trial data to support our new product’s efficacy.”

“The fruits aren’t financially evident yet, but there is a lot of activity occurring which will change this.”

“We are completing SBIR funded technology development period. Over the next 6 months we will migrate to product development and commercial contracts.”

“The CAP project has not had that much time to begin to change our sales. We are slowly beginning to see an increase in the product usage – the real test will come when researchers begin to publish papers using these tools. With the amount of time invested in the CAP this past year, it actually hurt short term contracts and sales since personnel time was moved from hustling new business to developing the materials for CAP. The company thinks that in the long term, this was a good investment of time.”

## Growth in Equity Funding



The three companies that credit their Equity Investment Growth to the CAP are [REDACTED].

Many comments from participants regarding CAP impact on Equity Investments can be found in the previous section on the Partnership and Financing Deals. Additional comments provided below show the complexities and difficulties that small companies have with fund raising.

“Still in the process of being Spun-out from parent ([REDACTED]), at which time we will be capitalized.”

“We are talking with key player who are major global companies relative to the commercialization of the technology developed under the grant. These discussions will proceed when all patents are files and the companies are ready to proceed with their testing of the technology.”

“We did not launch a formal fund raising campaign during this time frame, and therefore did not receive significant investment. We are currently focused on the testing to prove the technology. Investment received was for existing shareholders exercising warrants or buying additional stock.”

“We are an established herbal dietary supplement brand in the U.S. We are not currently seeking equity investments and are doing quite well on internal cash flow and conventional financing. We plan to seek equity investment in 2006, once we have obtained suggestive proof-of-principle data from a pre-clinical trial involving our NIH-funded commercialization product.”

“Discovered that our venture is still not attractive to VC’s for lack of demonstrating the proof of principle. We have an IRB approved for conducting a human clinical trials. However, we have not been able to obtain any private funding for accomplishing this important task. We have learned of the phase II competing and continuation proposal for sourcing additional funds from NIH. We have applied towards this federal funds.”

“We only recently completed our [REDACTED] analyst 3.2 software. During this baseline period, we tried to get agreements with one of the two world-wide largest NMR instrument vendors, [REDACTED]. The CAP and our advisor, [REDACTED], gave us valuable guidance. [REDACTED] was in a transition period and the single Larta contact attempt was unsuccessful.”

### **Mergers & Acquisitions**

██████████ was acquired by ██████████ and attributed some impact on acquisition to CAP.

## **Summary**

This first progress tracking report indicates that the CAP has substantially improved the participants' technology commercialization capabilities. Companies are vigorously engaged in a complex chain of activities-- from making contacts, to meetings, presentations, and negotiations—that are generally required to achieve deals and tangible benefits. The pattern of these activities is good and, to the extent that this is a numbers game, should result in a good deal flow in the future. The results to date are already impressive, with 16 companies reporting 23 deals. Companies raised \$15 million of equity funding, with CAP directly impacting \$2.4 million raised by 3 companies. Revenue growth was more modest and most companies reported that it was too early to assess the CAP impact. One company was acquired and they credited CAP with some impact. Progress tracking will continue through the end of 2006.

**APPENDIX**

**NIH-CAP 2004/2005**

**COMMERCIALIZATION PROGRESS TRACKING FORM**

PLEASE RETURN BY AUGUST 29, 2005 TO [KETZLER@LARTA.ORG](mailto:KETZLER@LARTA.ORG)

**Company Name:**  
**CAP SBIR Grant #:**  
**Name of Individual Completing Form:**  
**Position:**  
**E-Mail:**  
**Telephone:**

Please fill in the **COMPANY COMMERCIALIZATION PROGRESS TRACKING** form below. NIH is very interested in your commercialization progress and if the CAP program was helpful. To start, we are looking for your inputs about your commercialization progress from September 2004 until June 2005 to serve as a base. At six-month intervals (January 2006, July 2006, and January 2007), you will receive similar forms in order to assess the long-term impact of the CAP. We also believe that such tracking can be beneficial to you as a management tool to periodically assess your company's progress and growth.

The tracking form is divided into four parts: (1) partnerships and financing deals, (2) revenue (3) equity investment, (4) and other success indicators (employees, acquisitions)

1. PARTNERSHIPS AND FINANCING DEALS

- a) As it relates to your CAP-related technology, please indicate your company's progress with respect to partnerships and financing deals. State the number of partnership and deal-related activities in which your company has engaged between *September 1, 2004 and June 1, 2005*. If you are pursuing both partnering and financing, add the numbers together.

	<b>Number of Partnership and Deal Related Activities Your Company Has Engaged in Between September 2004 and June 2005</b>	<b>Describe Significant Outcomes</b>
<b>Contacts with Investors and Partners</b> Count only contacts you had a meaningful conversation with about your mutual interests		
<b>Meetings with Investors and Partners</b> Meetings can be face-to-face or by phone/web but should involve exploration of potential deals in some detail.		
<b>Confidential Disclosure Agreements signed</b> CDA (NDA) agreements are generally a pre-requisite for any serious discussion with potential partners. Investors generally do not sign CDAs.		

	Number of Partnership and Deal Related Activities Your Company Has Engaged in Between September 2004 and June 2005	Describe Significant Outcomes
<b>Negotiations with Investors and Partners</b> At this stage, all parties are interested in the deal and you are exploring various give and take.		
<b>Initial Proposals and Term Sheets</b> These are binding proposals of key terms of the deal.		
<b>Deals</b> Signed legal documents and money in the bank. Please indicate the dollar amount of each deal.		

- b) As it relates to your CAP-related technology, separately assess the impact of the CAP on each category for the same period.  
(Insert a rating between 1 and 5 where the lowest rating 1= would have happened irrespective of the CAP and the highest rating 5= would not have happened without the CAP. Insert NA for Not Applicable).

	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	NA
<b>Contacts with Investors and Partners</b> Count only contacts you had a meaningful conversation with about your mutual interests						
<b>Meetings with Investors and Partners</b> Meetings can be face-to-face or by phone/web but should involve exploration of potential deals in some detail.						
<b>Confidential Disclosure Agreements signed</b> CDA (NDA) agreements are generally a pre-requisite for any serious discussion with potential partners. Investors generally do not sign CDAs.						
<b>Negotiations with Investors and Partners</b> At this stage, everybody is interested in the deal and you are exploring various give and take.						
<b>Initial Proposals and Term Sheets</b> These are binding proposals of key terms of the deal.						
<b>Deals</b> Signed legal documents and money in the bank.						

Comments:

2. **REVENUE**

- a) Please state the cumulative change in company revenue between September 1, 2004, and June 1, compared with the same period one year earlier. Do not include SBIR grants or other government contracts.

	<b>Change in the total company revenue in the period September 1, 2004 to June 1, 2005, compared with the same period one year earlier (\$000)</b>
<b>R&amp;D Contracts</b> R&D contracts with deliverables and customer rights to use. If there is equity involved in the deal, show those funds separately in the next section. Do not include government grants!	
<b>Products or Services</b>	
<b>Licensing Fees &amp; Royalties</b>	
<b>Whole Company (including non-CAP technologies)</b> Note that for this question, you should report the results for the whole company and not just your CAP-related technology.	

- b) Separately assess the impact of the CAP on the change in revenue for each category. (Insert a rating between 1 and 5 where the lowest rating 1= would have happened irrespective of the CAP and the highest rating 5= would not have happened without the CAP. Insert NA for Not Applicable).

	<b>Rating 1</b>	<b>Rating 2</b>	<b>Rating 3</b>	<b>Rating 4</b>	<b>Rating 5</b>	<b>NA</b>
<b>R&amp;D Contracts</b> R&D contracts with deliverables and customer rights to use. If there is equity involved in the deal, show those funds separately in the next section. Do not include government grants!						
<b>Products or Services</b>						
<b>Licensing Fees &amp; Royalties</b>						
<b>Whole Company (including non-CAP technologies)</b> Note that for this question, you should report the results for the whole company and not just your CAP-related technology.						

Comments:

3. **EQUITY INVESTMENT**

- a) Please state the total amount of equity investment received by the whole company INCLUDING your CAP-related technology in the time period *September 1, 2004 to June 1, 2005*.

	Amount of Equity Investment (\$000)
<b>Friends &amp; Family</b>	
<b>Angels</b> High net worth individuals; always invest as individuals although may belong to angel organizations.	
<b>VCs</b> Institutional investors	
<b>Strategic Investors</b> Investors that are looking to achieve other goals in addition to financial returns. Typically corporations seeking to fill or expand their product lines.	

- b) Separately assess the impact of the CAP on each category for the same period (Insert a rating between 1 and 5 where the lowest rating 1= would have happened irrespective of the CAP and the highest rating 5= would not have happened without the CAP. Insert NA for Not Applicable).

	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	NA
<b>Friends &amp; Family</b>						
<b>Angels</b> High net worth individuals; always invest as individuals although may belong to angel organizations.						
<b>VCs</b> Institutional investors						
<b>Strategic Investors</b> Investors that are looking to achieve other goals in addition to financial returns. Typically corporations seeking to fill or expand their product lines.						

Comments:

#### 4. OTHER SUCCESS INDICATORS (EMPLOYEES, ACQUISITIONS)

- a) Have the number of employees in your company increased since the inception of the CAP (September 1, 2004)? If yes, please specify the number of employees in September 1, 2004, versus the current number of employees, and the titles/positions of the new employees.

Employee Information

	<b>Employee Information</b>
<b>Number of Employees in September 1, 2004</b>	
<b>Current Number of Employees</b>	
<b>Titles/Positions of New Employees</b>	

b) Has your company been acquired? Yes \_\_\_\_ No \_\_\_\_

If yes, please provide briefly details of the acquisition. NIH would like to continue tracking the progress for the next 18 months of the technology it has funded, therefore please provide briefly, details of the acquisition, including changes in company name and contact information.

	<b>Acquisition Information</b>
<b>Name of the Acquiring Company</b>	
<b>Change in Company Name as a Result of the Acquisition</b>	
<b>Change in Company Contact Information as a Result of the Acquisition</b>	
<b>Additional Details</b>	

**THANK YOU ONCE AGAIN FOR YOUR PARTICIPATION IN THE 2004/2005 CAP AND FOR YOUR FEEDBACK. IT WAS A DELIGHT TO WORK WITH YOU AND WE WISH YOU THE BEST OF SUCCESS.**