

Testimony of Zachary J. Shulman

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At a Hearing of the Joint Economic Committee

“Fueling Local Economies: Research, Innovation and Jobs”

June 29, 2010

Good morning Chairwoman Maloney, members of the Committee. Thank you for inviting me to testify before the Joint Economic Committee today. My name is Zachary Shulman. I am a professor at The Johnson School at Cornell University where I teach courses on entrepreneurship and run a program called Entrepreneurship@Johnson. I also am a managing partner at Cayuga Venture Fund, an Ithaca-based venture capital firm.

I believe the partnership between government-sponsored research dollars, Cornell University, and Cayuga Venture Fund is a model that can be replicated in smaller cities throughout the United States that have a strong research university. This kind of partnership leads directly to new consumer products and services, job creation and retention in the community, and direct economic growth in terms of revenue generation and expansion of the tax base.

Cornell University is a major research university located in a small town. It ranked first in New York State and fifteenth in the U.S. in research spending in 2008 with a level of approximately \$688 million. I expect comparable rankings in 2009, as the University's research expenditures fell only slightly to \$687.4 million. The spillover effect on employment and company growth in the Ithaca region as a result of such spending is real and measurable. The Bureau of Labor Statistics reports that Tompkins County has the lowest rate of unemployment in New York State, 5.2 percent in May 2010, compared with a state rate of just over 8 percent.

Cayuga Venture Fund is a small fund in a small community. Since 1995, we have been working to create and establish a thriving community of leading edge, high tech start-up companies in Ithaca and upstate New York by providing the necessary capital and other resources they need to grow and prosper. We have a history of opportunistic investing across a wide variety of industry sectors. Many of our companies have a strong Cornell University technology connection.

To date, Cayuga Venture Fund III (our current fund) has invested in 11 companies, seven of which are commercializing technologies developed at Cornell. Additionally, two of the remaining four have significant grant supported collaborations with Cornell. These nine companies currently employ more than 450 people and that number is growing. Together, their payrolls are in the tens of millions of dollars. Likewise, in 2009 these nine companies

generated revenues of approximately \$95 million. They have attracted more than \$300 million in total investment dollars from CVF and our investment partners.

Startup companies mean more jobs, more payroll, more revenue, a higher tax base, and more dollars invested. As the unemployment figures for Tompkins County suggest, smaller communities feel the relative impact of such drivers of economic growth to a great degree.

Cornell is more than just a government-funded research engine, but is a full partner in the economic growth and development of Ithaca, Tompkins County, and New York State. You are probably most familiar with the way that Cornell partners with the government to attract research dollars from federal and state agencies. The University also partners with faculty as they create new intellectual property by providing lab space, library resources, and support services. Once promising IP has been developed, Cornell's partnership extends to post-research activities – technology transfer and commercialization – that foster company creation and sustained growth.

On the company creation side, the Cornell Center for Technology Enterprise & Commercialization (CCTEC) manages the technology transfer process for the main campus in Ithaca, the Weill Cornell Medical College campus in Manhattan, and the New York State Agricultural Experiment Station in Geneva. CCTEC connects Cornell technology to industry and business development efforts by working with entrepreneurs (including some faculty members) to vet technologies, research commercial viability and market need, and license technologies to startup companies. Without the technology transfer function, much university research would never leave the laboratory and the innovation culture would stagnate completely.

On the sustained growth side, startup companies need capital to get off the ground. Some are funded at inception by the Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) programs and related grants. Those programs are helpful, but only up to a point. Without committed seed stage investors such as venture capital firms and angel investors, most technology-based startups would die. Cornell has taken the critical step of investing some of its endowment funds in CVF. This allows us to attract additional investors into our fund – for example, Cornell alumni who care about startup investing and care that their alma mater is committed to startup growth – and, more importantly, allows us to attract additional direct investors into our companies. Simply stated, without Cornell's investment in our fund, our model would be severely hampered and likely unsustainable.

In summary, entrepreneurial communities built around strong research universities have an advantage only if the university embraces the value that startup companies bring to their community. In my view, the federal government could foster the sort of partnership that has flourished at Cornell by directing universities that receive federal research dollars to invest in company formation. For example, if a tiny portion of research dollars were set aside for such investing activity, it could be leveraged to have a huge impact. Cornell has invested approximately \$18 million of its own resources in CVF (\$12 million in our current fund), which we in turn have leveraged into over \$300 million of investment.

Finally, let me suggest several ways that the federal government could help foster the commercialization of university-developed technologies:

1. As stated above, the government could mandate that a university recipient of research dollars apply a small percentage these funds to actual company investment. In other words, if the research yields a technology or process worthy of commercialization, a small portion of research dollars would be invested in the company (in exchange for equity) and spent on building prototypes and doing market assessments.
2. The government could offer direct tax credits for investments made in companies commercializing university-developed technologies. This would attract investment at the critical start-up phase when it's needed the most. The credits could be limited to investments into pre-revenue companies.
3. The government could actively support regional research and commercialization business parks associated with research universities, mainly in the form of tax relief. I believe that the Senate is already having discussions on this topic.

It has been a pleasure to testify before your Committee. Thank you. I would be pleased to answer any questions you may have.