



WHITE PAPER

VENTURE PHILANTHROPY DONE RIGHT

How leading foundations are leveraging venture philanthropy to drive cures.

In our work at the Harvard Business School Kraft Precision Medicine Accelerator, one conclusion stands out: those disease foundations making significant progress in driving the development of treatments and cures have three things in common: **a clear strategy, strong leaders—and the ability to catalyze a great deal of funding.**

Have no illusions: money matters. Developing treatments, conducting clinical research, and driving cures requires serious capital, not the type of funding raised through bake sales and walkathons.

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ENTER VENTURE PHILANTHROPY

So how do nonprofit foundations that are focused on a particular disease go about attracting the serious amount of capital needed to make a meaningful difference in treating and curing a disease?

The answer lies in venture philanthropy.

The philanthropy element involves convincing high net worth individuals to make philanthropic donations to a disease-focused venture philanthropy fund. Interest in venture philanthropy and impact investments is growing as an increasing number of wealthy individuals want to see their philanthropy generate a tangible impact.

But the key to venture philanthropy—and what makes it different from traditional philanthropy—is in the *venture* element. A venture philanthropy fund doesn't operate in the traditional way of making grants to fund scientific research. A venture philanthropy fund acts like a venture capital fund in making *investments* in *for-profit entities* with the intent of generating a financial return. (Or, if grants are provided, those grants come with terms that enable the venture philanthropy fund to participate in the financial upside produced.) The positive returns that are generated come back to the fund, which then reinvests the capital in additional opportunities.

Venture philanthropy is a win/win on multiple dimensions. It provides targeted funding to develop treatments for a specific disease, benefitting patients. It provides necessary capital to help commercialize promising scientific discoveries and bring these discoveries to market. It enables philanthropic donors to see the impact their contributions are having. And, the returns that are generated provide a source of sustainable funding for a foundation to take more targeted shots on goal.

PROFILES OF VENTURE PHILANTHROPY SUCCESS

Highlighted below are four examples of disease-focused organizations with very different approaches to venture philanthropy, driven by their disease situation.



JDRF T1D Fund

Type 1 diabetes (T1D) is the fourth largest autoimmune disease in the US, affecting about 1.6 million patients, and approximately 20 million patients globally. However, as of 2016, there were zero disease-modifying therapies for T1D and little investment capital devoted to cure therapies for this disease, which relies on symptomatic treatments through lifetime insulin delivery and management.

Based on these market dynamics, JDRF, the world’s leader in T1D research, created the T1D Fund. The T1D Fund is a high-impact venture philanthropy fund with a narrow focus on T1D and a goal of **catalyzing the venture capital community** to investment in curing T1D.

The T1D Fund’s Chairman, Sean Doherty, explained, “Our model is premised on leveraging venture capital. I believe if you have really smart people with a lot of capital and an economic incentive, and you show them a good idea, good things will come from it.”

The T1D Fund is managed by a full-time staff of experienced life sciences investment professionals, with unmatched T1D focus and expertise, and access to a global scientific network of T1D experts.

As shown below, to date, the T1D Fund has raised and invested about \$70 million—in large increments from high net worth individuals. The T1D Fund has in turn attracted almost \$400 million in private investment, mainly from life sciences VC firms. Since its inception, private investors, investing alongside the T1D fund, have provided leverage of almost 6X.

Market Dynamics (as of 2016)

- Large market, with 1.6M patients in US
- Strong scientific knowledge of type 1 diabetes
- Low market maturity, with 0 approved therapies, as science has not been translated into commercially available treatments

Funding strategy: Catalyze the VC Community

The T1D Fund’s initial investments have already returned about \$46 million, which is being recycled and reinvested. Also, importantly, the fund has attracted investments from around 30 venture capital firms, 20 of which had never previously made an investment in type 1 diabetes.

By educating VCs about the opportunity in T1D and by attracting VCs to invest alongside the T1D Fund, it is the hope of the leaders at the JDRF and the T1D Fund that life sciences venture capitalists will continue to see this space as an attractive opportunity and will continue to invest significant capital in type 1 diabetes for years to come.

Ultimately, the success of several of these companies should lead to billions of dollars in pharmaceutical company investment that are required for cure therapies in T1D.

T1D’s Investment focus	# of investments	\$ from T1D Fund	\$ by private investors	VC leverage
Immune therapies	10	\$32M	\$174M	5.4X
Beta cell therapies	9	\$18M	\$183M	10.2X
Improving lives	7	\$16M	\$34M	2.1X
Total	26	\$66M	\$391M	5.9X



Alzheimer's Drug Discovery Foundation (ADDF)

The ADDF was founded in 1998 with \$100 million from the Estee Lauder Trust. Since its inception, all ADDF funding has gone toward translational science, not patient care.

With the pharmaceutical industry pouring billions of dollars into R&D related to the amyloid hypothesis, the ADDF decided to take an alternative approach. Per CEO Mark Roithmayr, this meant pivoting to take multiple shots on goal, "where the lights were not shining."

The ADDF has pursued a pure venture philanthropy model, making only investments, not grants. The ADDF's strategy is a "biology of aging" focus.

The ADDF's venture philanthropy model has the following components:

- Consistently raising \$25 to \$30 million per year from high net worth individual donors who contribute a minimum of \$25,000 each, up to six and seven figures. These individuals understand the venture philanthropy model and have an appetite for risk. These donations provide a sustainable source of capital for the ADDF, which is used each year to take multiple shots on goal. The ADDF currently has \$44 million in active investments related to 35 active clinical trials. Almost half of the ADDF's portfolio comprises investments in trials of repurposed drugs.
- A separate fund of \$50 million, being raised over a three-year period, to serve as the Diagnostics Accelerator research initiative, fast tracking the development of simple, reliable, and affordable Alzheimer's biomarkers and novel diagnostics technology, including blood tests, eye scans, genetic tests, and digital tools.
- A \$100 million fund that is currently being raised from donors at \$10 million each to provide additional capital to double down on promising phase 2 clinical trials.

Market Dynamics

- Huge market, affecting more than 6 million Americans, and increasing as population ages
- Only 1 approved disease-modifying treatment (June 2021)
- A great deal of pharma activity, mainly focused on amyloid

Funding strategy: Venture Philanthropy to fund multiple shots on goal

The ADDF has 28 staff members, half of whom are scientists and half are business people. The scientists look solely at the scientific potential of a discovery. For those discoveries meriting investment, the business people step in and negotiate the deal structure. Since its inception, the ADDF has generated \$21 million in returns, with \$8 million coming in just 2021 and more than \$4 million in 2020.

Key to the ADDF's success has been a concerted, sustained effort to cultivate and manage relationships with high net worth individuals who provide the lifeblood of the ADDF's funding.



The Cystic Fibrosis Foundation (CFF)

The Cystic Fibrosis Foundation, founded in 1955, had been a typical disease-focused organization providing patient support and advocacy. In 1994 the CEO changed the mission to focus on developing a drug for CF.

From 1998 to 2005 the CFF invested \$150 million from its endowment in drug development. This investment led to the first drug for CF in 2012. The CFF sold its investment for \$3.3 billion. This investment has had an enormous impact for patients and produced a very large financial return, which is now being reinvested into finding a cure for CF. The CFF's success makes the organization a poster child for venture philanthropy.

The CFF is now rethinking its approach to identifying the best ideas and sourcing deals. As background, for years the organization's approach was that people and companies would come to the CFF saying, "We want to do something for cystic fibrosis."

But as the CFF looks to the future, with a mission of curing CF, cures are going to come from gene therapies and gene editing, which requires a different approach from the CFF. So, instead of sitting back and waiting for CF-specific ideas, the CFF has decided to become proactive in identifying exciting early-stage technologies with potential application for CF.

Market Dynamics

- More than 30,000 people in the US have CF, more than 70,000 worldwide
- There are several therapies for CF but, no cure

Funding strategy: Collaborate with VC firm focused on identifying exciting early-stage genetic discoveries applicable to CF

To identify these opportunities, the CFF has decided to collaborate with a venture capital firm with a focus on genetic technologies. This VC firm already has people looking into exciting opportunities. Now, if the VC firm identifies opportunities with a possible application for CF, the CFF can invest. To support this effort, the CFF has created an incubator with \$20 million, though the amount can be increased.

While just getting started, this VC firm has already identified a potential opportunity where the company would not have thought to apply its discovery to CF and where the CFF would not have known about the opportunity.

The CFF hopes that this approach helps in identifying and sourcing new opportunities, as the CFF seeks to continue to use its expertise to advance its mission.



EB Research Partnership (EBRP)

Epidermolysis Bullosa (EB) is a group of devastating and life-threatening skin disorders that affect children from birth. EB is a rare disease that affects from 25,000 to 50,000 people¹ in the United States. There are currently no treatments for EB.

Based on these market dynamics, EBRP began with a venture philanthropy model to fund academic research. Based on EBRP’s experience, the organization’s model has evolved over time to focus on forming new companies and then consolidating these companies into a holding company.

EBRP’s funding model has evolved over time through four stages, as shown below.



Stage 1: Academic. With no treatments and little research on EB, EBRP undertook venture philanthropy. EBRP would fund relevant research at a university or would put together consortiums from across multiple universities. To monetize this work, EBRP—as the leading funder (and the “800-pound gorilla in the space”)—required a royalty share and/or rights to any IP generated. Per EBRP co-founder and chairman, Alex Silver, “This was effective in that it secured a seat at the table when the IP moved from academic to commercial settings.”

Also, these research efforts advanced scientific knowledge and understanding of EB at the molecular and genetic levels, creating momentum around EB and leading to the evolution of EBRP’s model.

Stage 2: Private/Public Biotech & Pharma. EBRP wanted to see research results commercialized. To accelerate commercialization, EBRP started funding private and public companies. This involved an array of structures, such as taking restricted stock, or guaranteed ROI of investment. This stage yielded positive outcomes, such as a \$500,000 investment which produced a 6X ROI in three years.

Market Dynamics

- Very small market, with 10,000-25,000 patients in the US
- Early but rapidly growing scientific knowledge
- Low market maturity, with 0 approved therapies

Funding strategy: Form Companies to cure EB

Stage 3: New Company Formation. EBRP evolved further by no longer just investing in existing companies but forming new companies. This has included working with entrepreneurs to establish entirely new companies or lifting out pieces of existing companies to form a new company—for example creating Wings Therapeutics by lifting it out of ProQR. These companies tend to be focused on single therapies for EB. A number of these companies are showing promise.

Stage 4: Holding Company (Merger). Knowing that early-stage biotech companies will need far more capital as they move into clinical trials, EBRP has decided to create a holding company to house all of its companies and other rare derm and inflammatory condition therapies.

This holding company, which has one permanent management team, intends to raise meaningful amounts of capital from institutional investors. EBRP owns 20% of this holding company at formation.

In addition to pursuing EB therapies, the holding company will focus on “derm,” which is unique in that there are few derm-focused companies and there may be significant derivative or adjacent opportunities in derm—such as cosmetic applications—with commercial potential. As Silver said, “Our goal is to de-risk research by bringing capital to this rare derm company with multiple shots on goal. This enables us to accelerate EB and other treatments.”

This strategy of taking multiple focused shots on goal along with exploring adjacent opportunities is a model that could apply to other rare diseases.

¹ [https://med.stanford.edu/dermatology/resources/gsdsc/eb_clinic/eb-faqs.html#:~:text=severely%20affected%20individuals\),.How%20common%20is%20EB%3F,the%20United%20States%20have%20EB](https://med.stanford.edu/dermatology/resources/gsdsc/eb_clinic/eb-faqs.html#:~:text=severely%20affected%20individuals),.How%20common%20is%20EB%3F,the%20United%20States%20have%20EB)



KEY ELEMENTS OF VENTURE PHILANTHROPY SUCCESS

Success in venture philanthropy is not easy and is not for the faint of heart. But these profiles of very different organizations, focused on very different diseases, show how organizations are utilizing different approaches to venture philanthropy to drive meaningful success.

Lessons learned from these leading organizations include:

- 1 Venture philanthropy requires the right organizational mindset.** Venture philanthropy involves making investments in for-profit entities with the goal of generating a financial return. Not all non-profit boards understand or buy into the basic premise of venture philanthropy. Without the right mindset and buy-in, it won't work.
- 2 Venture philanthropy requires the right funders.** Venture philanthropy requires attracting and engaging funders who support making investments and who understand that the returns generated will flow back to the fund but not to the donor. This requires sophisticated funders who believe in the potential of venture philanthropy as a funding strategy to drive cures. Also, the most successful funds raise capital in large increments, such as having a \$100,000 minimum to participate in a fund.
- 3 Successful venture philanthropy funds treat their donors/investors as VIPs.** The leading funds don't take their major donors for granted. They realize that these individuals are used to receiving special treatment. They provide regular updates on the funds investments and the progress of these investments, including both scientific and financial updates. They share pitch decks, have exclusive calls and events, and provide special treatment. It's not an accident that ADDF has such great success with high net worth donors; they know exactly how to build and sustain relationships with these individuals.
- 4 Venture philanthropy requires both scientific and financial expertise.** While impact investing and venture philanthropy are frequently used buzz words, managing a venture philanthropy fund is not for amateurs. It requires sophistication and expertise in sourcing and structuring deals. It also requires deep scientific expertise to identify the most promising scientific discoveries for a particular disease. At the Alzheimer's Drug Discovery Foundation, the 28 staff members are equally divided: half are scientists and half are business people.

- 5 There is no one-size-fits-all approach; a fund's strategy will vary based on the disease.** Every disease is different. There is a different level of scientific knowledge and commercial development and a different market size. There are rare diseases with small market sizes and no approved treatments. There are diseases with larger markets and some approved treatments, but no cures. The right venture model will vary based on the specific situation, bottleneck, and strategy for a particular disease.
- 6 The value proposition for venture philanthropy goes beyond just providing capital.** With traditional venture capital, a VC fund provides capital and perhaps some operational and strategic advice. But a disease-focused venture philanthropy fund can provide value in multiple ways that help a commercial venture succeed. A disease-focused fund provides money, expertise, and focus on a particular disease, and access to an entire ecosystem including patients, scientists, and a clinical research network.

CONCLUSION

These leading cure-seeking organizations show that it is possible for disease-focused foundations to make meaningful progress in driving treatments and cures. The keys are a clear strategy, strong leadership, and serious funding. The other key is resolve. That's because developing treatments and getting them to patients is neither easy nor fast. The strategies, funding, and commitment of leaders and boards must be sustained for the long term, despite inevitable bumps in the road. Strategy. Leadership. Funding. Resolve.