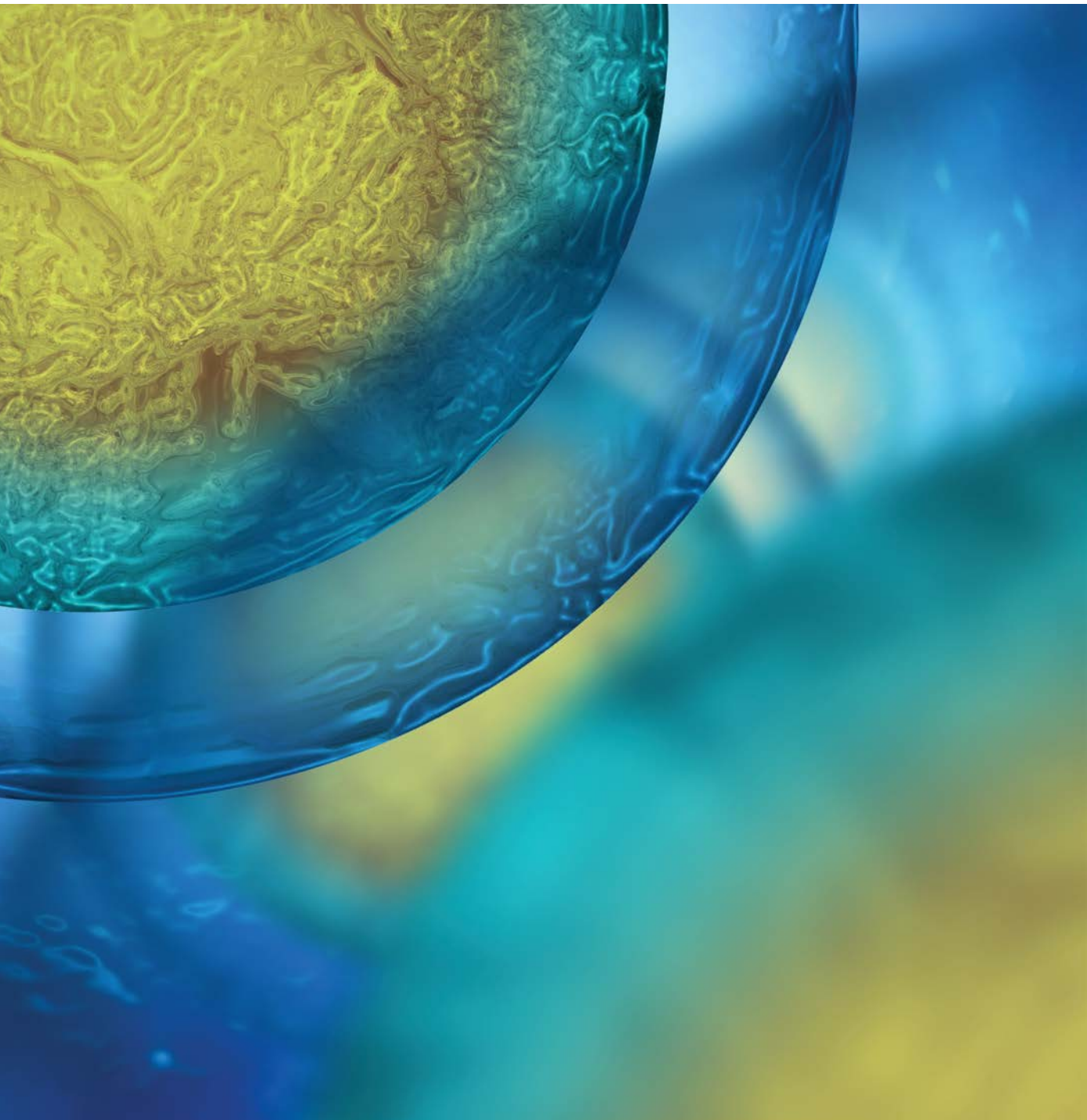


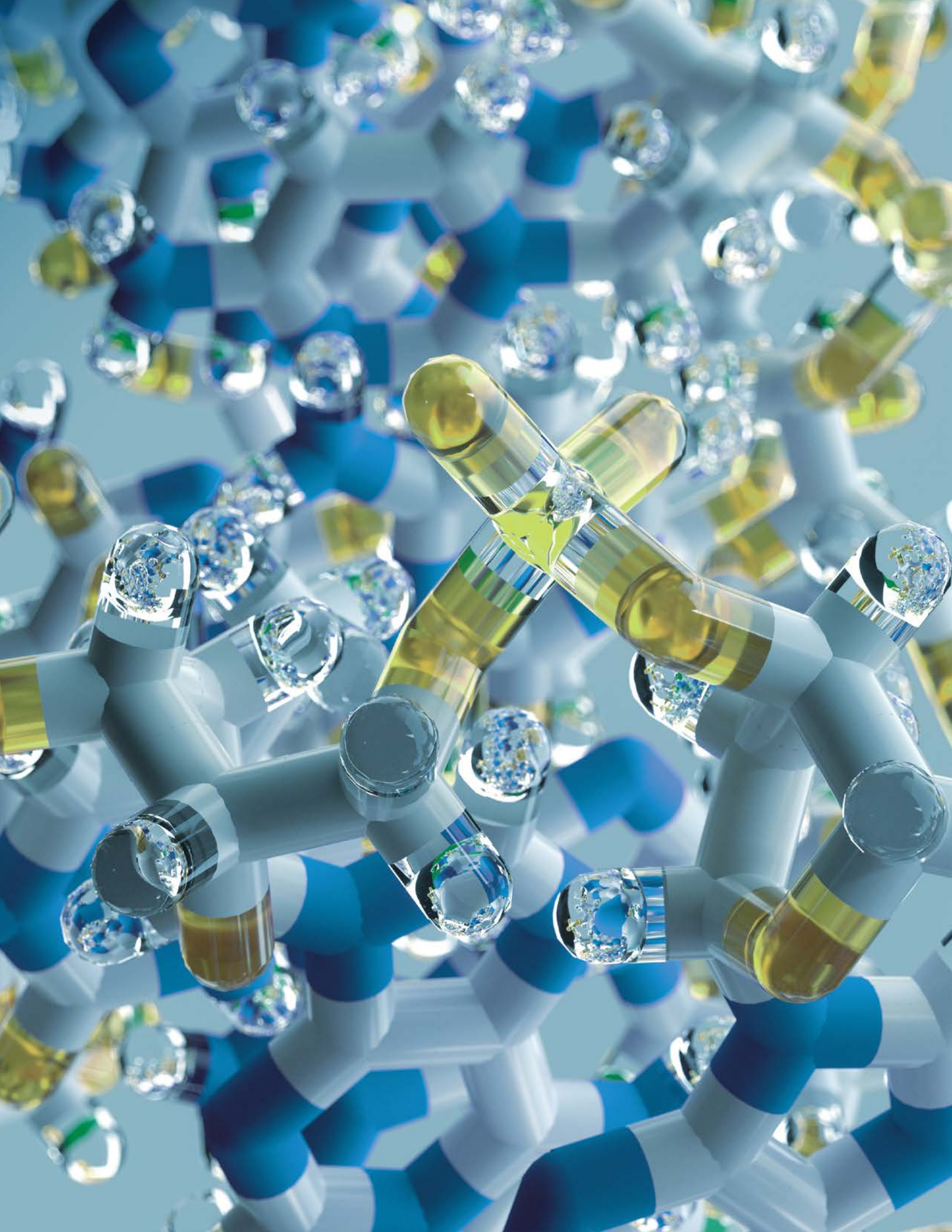
Morgan Stanley

# Morgan Stanley GIFT Cures<sup>SM</sup>

powered by Harrington Discovery Institute

Special Interest Program of Morgan Stanley Global Impact Funding Trust (Morgan Stanley GIFT)





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Accelerating the Path From Discovery to Cure

The path from scientific breakthrough to clinically available therapy can and must move faster to produce a far greater number of life-saving and life-enhancing medications. Morgan Stanley GIFT Cures, the first special interest program of Morgan Stanley GIFT, in collaboration with the Harrington Discovery Institute, advances development of cures for the world's most devastating diseases.

We live in the greatest era of scientific advancement in recorded history. The billions of dollars of public, private and philanthropic investment in medical research continues to yield groundbreaking insights into the causes and characteristics of our most persistent diseases. As patients and their families look to be part of the solution through their charitable donations, the field of philanthropy in particular has played a large role in advancing medical discoveries.

Morgan Stanley Global Impact Funding Trust (Morgan Stanley GIFT), established in 2000, is one of those players. After 19 years of working with the firm's most dedicated and sophisticated philanthropists, Morgan Stanley GIFT realized that despite the generosity of donors within the Morgan Stanley GIFT community

and around the world, there are far too many patients and families struggling with diseases for which there are no cures or meaningful treatments. Why are the therapies to treat those diseases so slow in coming? Why do hundreds of millions of families touched by cancer, Alzheimer's, heart disease or the most heartbreaking pediatric illnesses have to wait and wonder when hope is coming, and whether it will come in time?

The primary issue is that it takes far more than basic research to produce a clinically available medication. The process of creating, testing and gaining approval for new treatments is lengthy, complex and expensive, and there are few guarantees of success. The lack of financial resources and guidance for scientists, and an inadequate commitment to new drug development, has created a wide gap right in the middle of the development

\$2.6  
Billion

is the estimated cost to develop one new drug.<sup>1</sup>

133  
Million

Americans are affected by chronic disease including Alzheimer's, cancer, diabetes and heart disease.<sup>2</sup>

80-90%

of research fails before it reaches clinical testing.<sup>3</sup>

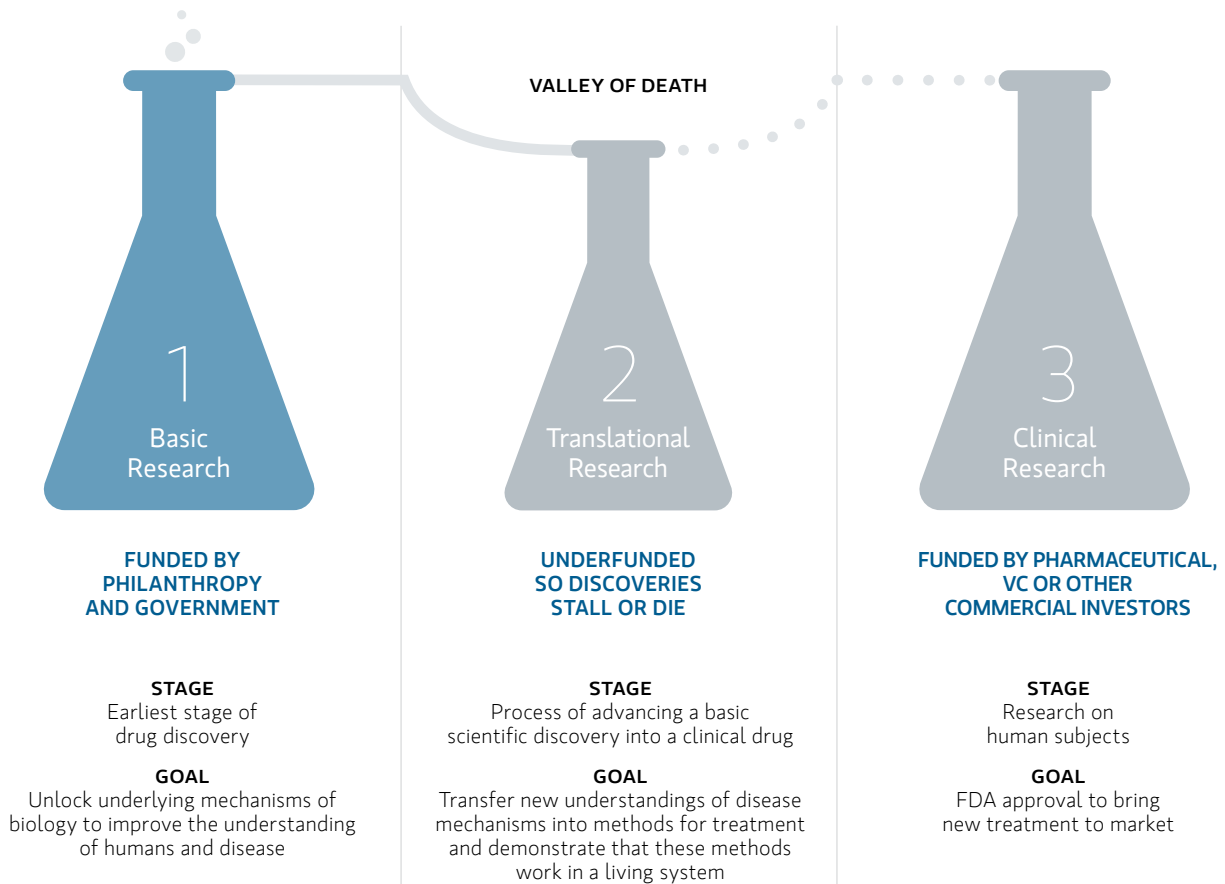
pipeline. Known as the “Valley of Death,” this gap is where the funding for research tends to run out but new medicines are still too risky to attract significant investment from the pharmaceutical industry and venture capitalists. The result is that the vast majority of promising new medicines stall between the research lab and the doctor’s office.

Morgan Stanley GIFT Cures<sup>SM</sup> powered by Harrington Discovery Institute is the first special interest program of Morgan Stanley GIFT dedicated to bridging the Valley of Death and raising the standard of care across a wide range of diseases.

The Morgan Stanley GIFT Cures program provides opportunities for new and veteran philanthropists to combine

their resources to magnify the impact of their medically related giving, whether they wish to focus on a specific disease or across a broader spectrum. It is also an opportunity for those interested in becoming part of a donor community, and learning about best practices in healthcare giving and the issues related to bringing drug therapies to market from the field’s leading experts.

## Research Funding Gap Caused by the Valley of Death



### **Harrington Discovery Institute: Pioneering a New Drug Development Process**

Housed within University Hospitals of Cleveland, Ohio, but with a mission to generate next-generation cures for a nation, Harrington Discovery Institute was established in 2012 with a \$50 million gift from medical supply entrepreneur Ronald Harrington and his family. Harrington Discovery Institute's founding mission was to create a powerful system for drug development for the nation's most promising discoveries, primarily in response to two simple questions: Why does it take so long for medical breakthroughs to yield life-enhancing and life-saving new drugs, and where should financial, consultative and management resources be invested to improve and accelerate that process?

Since 2012, Harrington Discovery Institute has become the center of a rapidly growing national initiative to advance the most promising new therapies through the drug development pipeline. While their programs address a broad range of diseases and therapeutic needs, Harrington Discovery Institute prioritizes discoveries in areas where there are currently no meaningful treatment options. Such diseases currently afflict 350 million people for whom there are no cures or therapeutic options.<sup>4</sup> With the help of Morgan Stanley GIFT Cures, Dr. Jonathan Stampler, President of Harrington Discovery Institute, predicts "We will expand the platform to new therapeutic areas of unmet need. With this growth, you will see us increase our impact as we strive to realize our vision of advancing new medicines to patients."

## Morgan Stanley GIFT Cures is Funding Multiple Programs to Advance Treatment for:

Blindness

Cardiovascular Disease

Cancer

Bone and Joint Disease

Infectious Disease

Diabetes

Alzheimer's and Neurosciences

Gastrointestinal Disease

Respiratory Disease

Rare Disease

500  
treatments  
exist for roughly  
10,000+  
diseases.<sup>5</sup>

### Filling an Unmet Need

Harrington Discovery Institute is unique in the medical research community in that it focuses on medical breakthroughs that show great promise but otherwise wouldn't have the opportunity to be advanced to the clinic. Harrington Discovery Institute's process changes the value equation. By concentrating philanthropic, technical and business development resources during the earlier, high-risk stage of development, they advance breakthrough discoveries to a point where they can attract investment from the pharmaceutical industry and venture capitalists.

For millions suffering from major diseases, like Alzheimer's, cancer and heart failure, there are no good options.

"Sitting on the shelves of nearly every health system or university is a treasure trove of discovery that represents promise unmet," explains Dr. Stamler. "But the greatest ideas come with greatest risk, so we de-risk and prepare them for commercial investment."

## HARRINGTON DISCOVERY INSTITUTE IN ACTION

### Treating Alzheimer's

Jerri Rook, MD, an assistant professor at Vanderbilt School of Medicine, discovered a therapeutic treatment for Alzheimer's disease that showed potential to improve patient memory. While the industry was incredibly excited by her breakthrough, there were serious concerns about the drug's side effects. Because of this, the treatment wasn't gaining traction with the pharmaceutical industry or investors.

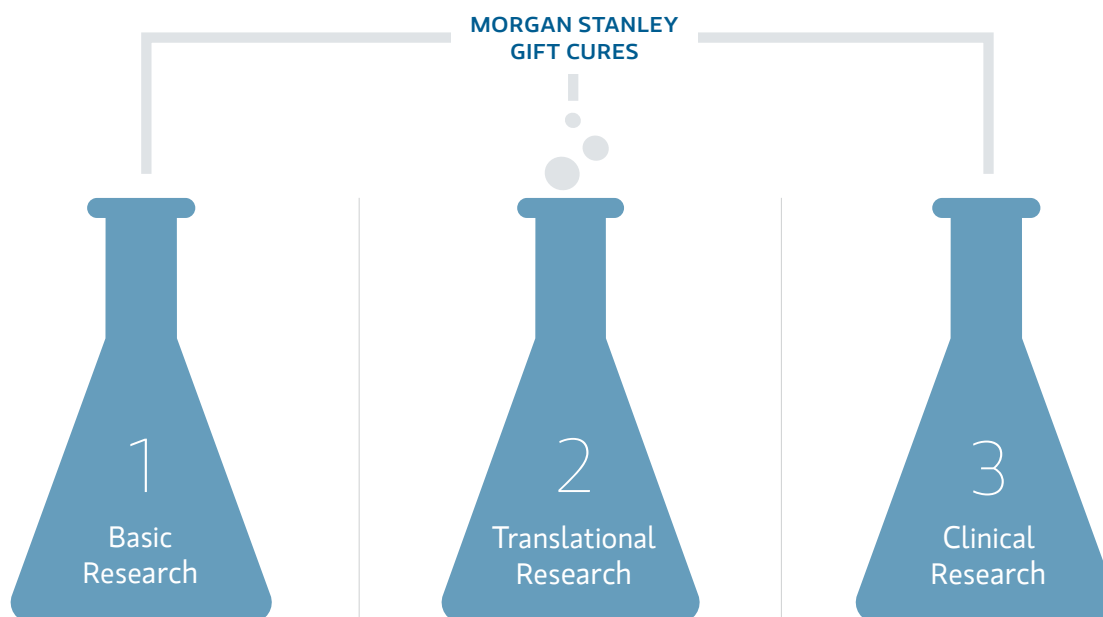
Harrington Discovery Institute and the Alzheimer's Drug Discovery Foundation (ADDF) recognized Dr. Rook's work through a competitive selection process. She was named an ADDF-Harrington Scholar and given the funding and drug development support to help bridge the gap between basic discovery and the clinical realm. Harrington Discovery Institute worked with Dr. Rook to:

- Identify ways to diminish and/or eliminate the side effects, and
- Prepare the FDA application package for the clinical phase, which is critical to attracting investors and the pharmaceutical industry.

Dr. Rook's patients are currently undergoing clinical trials, and there is hope that the pharmaceutical industry will now come in, take a license and move the molecule forward. "Harrington Discovery Institute really made us stop and think about where we were going and the best, most efficient path to getting there," says Dr. Rook. "I cannot imagine where we'd be right now without the help of Harrington Discovery Institute."

## Morgan Stanley GIFT Cures: Bridging the Valley of Death and Advancing Cures

Morgan Stanley GIFT Cures is designed to bridge the Valley of Death and advance the development of life-saving and life-enhancing treatments.



Harrington Discovery Institute has developed a unique solution to drive early-stage discoveries toward a better chance of success:

1. **SOURCE** thousands of medical discoveries through an open call for submissions annually from prominent research universities and medical centers throughout the U.S., Canada and the U.K., creating a treasure trove of potential breakthroughs.
2. **ENLIST** eminent scientists and pharma executives to help identify the discoveries with the greatest potential

to yield viable therapeutic advances across multiple diseases.

3. **"DE-RISK"** those discoveries by providing development infrastructure, expertise and financial support to move them through the earlier stages of the therapeutic pipeline.
4. **SUPPORT** the researchers through the process with a dedicated team of experts to provide the management, marketing and clinical trial experience needed to develop therapies to the point where they are commercially attractive.

### Attracting the Most Promising Ideas From the Most Qualified Scientists

Thousands of respected scientists and physician researchers from Harvard, Stanford, Oxford, Sloan Kettering, Cleveland Clinic, Johns Hopkins and dozens of other highly respected universities and medical centers submit their research to Harrington Discovery Institute for consideration to be included in their pipeline. How is a relatively young organization able to attract such widespread interest from such renowned institutions?

The answer lies partly in the quality of scientific and pharma talent on Harrington Discovery Institute’s staff, boards and oversight committees—all respected professionals with deep connections to the global medical research and pharmaceutical communities. The other part of the answer lies in the unique position Harrington Discovery Institute occupies in the drug development ecosystem. Universities and health systems are quick to offer their research because Harrington Discovery Institute has proven they have the capacity to move it forward. Finally, Harrington Discovery Institute funds everything philanthropically, so scientists retain full rights to their discoveries. “We take no rights, and no strings are attached; everything is driven by philanthropy,” explains Dr. Stamler.

**The Power of a Portfolio Approach**

There are few, if any, safe bets in medical research. Relatively few discoveries yield a viable medication, and fewer run the entire gauntlet of clinical trials. So rather than going all in on a single discovery in a given therapeutic area, Harrington Discover Institute takes a portfolio approach, simultaneously pursuing multiple paths to an effective treatment. This creates scale and diversification, and spreads the risks. To assemble these portfolios, they call on a team of national scholars to make the selections and a team of commercial reviewers to assign potential values. And then they bring in a world-class drug management team to get these discoveries to patients. No other organization in the country uses philanthropy in this way, to drive portfolios of discoveries

to development. “We work in a mission-driven way to de-risk the drug using portfolio approaches to attract investment,” explains Dr. Stamler.

**De-Risking Discoveries**

Once Harrington Discovery Institute has determined that a discovery is among those with the greatest potential in a given therapeutic area, they offer financial, intellectual and management resources to advance it through the early stages of the drug development pipeline. All Harrington programs get financial, business development and intellectual property issues worked out, as well as access to specialized technical infrastructure. This technical support is delivered by a unique network of highly accomplished drug developers, experienced

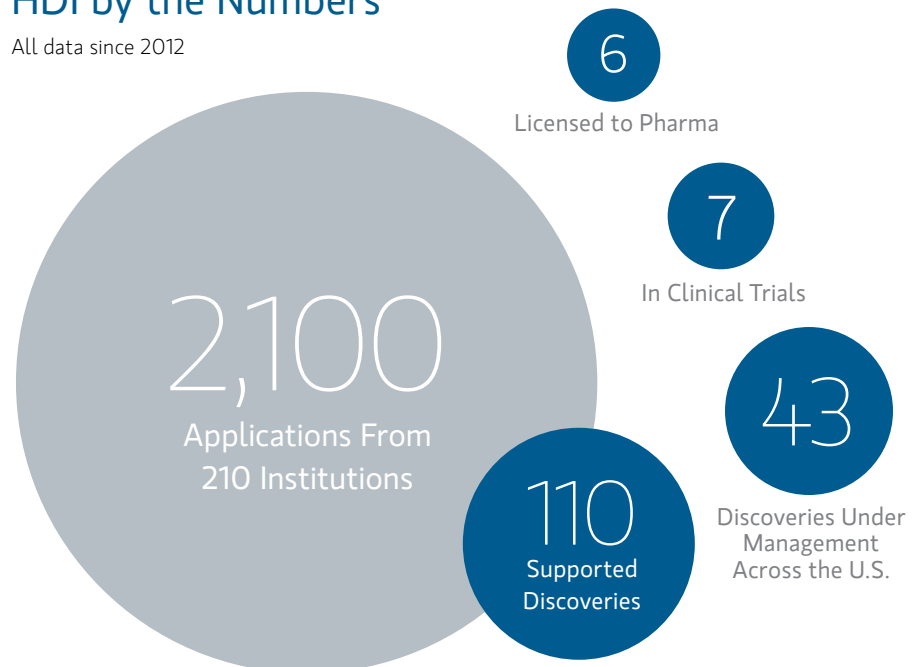
“I ran drug development for a large pharmaceutical company and we have the same, if not better, capability here at Harrington Discovery Institute. Plus, we are a lot more nimble and rigorous.”

**STEVE BRENNER, PH.D.**

Strategic Advisor  
Therapeutics Development Team

**HDI by the Numbers**

All data since 2012





“We take no rights, and no strings are attached; everything is driven by philanthropy.”

**JONATHAN STAMLER, MD**

President  
Harrington Discovery Institute

venture fund managers and biotechnology entrepreneurs. “Our teams know exactly what’s needed to make a drug and exactly what represents value creation in the drug-development industry,” says Dr. Stamler.

Harrington Discovery Institute’s technical and commercial support resources include:

- **Harrington Discovery Institute Management**, which includes experts in science, medicine and drug development;
- **Scientific Advisory Board**, which comprises some of the nation’s most accomplished scientific innovators, reviews proposals for the Harrington Discovery Institute scholar-innovator award and selects awardees based on quality of science, innovation and potential for impact;
- **Therapeutics Development Team**, which provides industry “know-how” to translate drug discovery projects to commercial drug approvals; and
- **Investment Advisory Board**, which brings an investor and commercial perspective to the projects.

### **Bringing Great Ideas to Scale**

Harrington Discovery Institute has received commitments of over \$300 million in the last seven years. They have built a portfolio of nearly 110 new drugs in

**HARRINGTON DISCOVERY INSTITUTE  
IN ACTION**

## A Discovery in Diabetes

Dr. David Clemmons, a physician scientist at the University of North Carolina, had identified and was in the process of optimizing a new therapeutic with the potential to treat multiple diseases. The medicine could improve treatment of diseases such as osteoporosis (porous bone) and diabetes through a novel mechanism of action in a family of insulin-like proteins. Harrington Discovery Institute, recognizing the potential of this discovery, deployed its experienced pharmaceutical development team to help Dr. Clemmons.

The team worked with Dr. Clemmons to:

- Determine the optimum structure of the drug
- Utilize the optimized drug and quantify its effect in studies

The drug was subsequently licensed by a pharmaceutical company and is now in clinical development.



It costs an average of \$2.6 billion to develop a drug from the earliest stages to final approvals.<sup>1</sup>

development—the result of more than 2,100 applications from 210 institutions. Of these, they currently manage over 40 discoveries, seven of which are in clinical trials. They have also licensed another six drugs to large pharmaceutical companies. Despite these successes, more than half of Harrington Discovery Institute’s

development projects require additional funding. “We have too much pipeline, too much discovery, too much promise that goes unmet due to lack of enough financial resources,” says Dr. Stamler.

Dr. Stamler believes the solution lies in pioneering more effective interfaces between nonprofit and for-profit investments to ensure funding for both the development and commercialization of promising drugs. On average, it costs \$2.6 billion to develop a drug from the earliest stages to final approvals.<sup>1</sup> But that is because the number averages in the high cost of failures. Those significant levels of investment are why trials are almost always sponsored and funded by the pharmaceutical industry, and why those

companies are highly selective in the drugs they bring to trial. Success would lower cost. By guiding therapies through the earlier phases of the pipeline, Harrington Discovery Institute substantially improves the risk-reward characteristics of for-profit investments and creates opportunities for more therapies to advance.

“Harrington Discovery Institute really pioneered the interface between nonprofit and for-profit in the models and efforts we undertake,” Dr. Stamler explains. “This is the future of drug therapy discovery.”

### A Revolutionary Philanthropic Opportunity

Philanthropists who support medical research often give directly to a single university or healthcare system. Over the years, their collective generosity has had a significant impact, and many promising discoveries would not have been possible without their donations. If the ultimate goal, however, is to help finance the development of clinically available cures, funding a single institution has limitations. Donors typically direct their philanthropy to one institution, when the most promising research could emerge from any of dozens of equally qualified research centers. Their

### ON A MISSION

Harrington Discovery Institute helps move drug discoveries into the commercial sector by combining philanthropy with mission-related investments.

money also goes principally into discovery because that is what institutions know best. The job of making a medicine out of a discovery is work unfinished.

Morgan Stanley GIFT Cures provides donors with an opportunity to strategically put their gifts to work in Harrington Discovery Institute's drug-discovery model and have their philanthropic dollars directed toward making commercially viable medicines for vast unmet needs. Donors will fund a portfolio of the most promising discoveries emerging from the world's most prestigious research labs, all competing with one another and moving forward toward the ultimate cure. As just one example, there are 40 major cancer centers in the U.S. alone. Rather than donating to one of them, the Morgan Stanley GIFT Cures program enables you to invest in great discoveries from all 40. It is this competition within a portfolio that allows the best ideas to rise

toward the top and, ultimately, create the most successful outcomes.

### Creating a Community of Dedicated Philanthropists

Harrington Discovery Institute's many accomplishments are only possible because of the contributions of dedicated philanthropists. Morgan Stanley provides an opportunity to support Harrington Discovery Institute's work through the Morgan Stanley GIFT Cures program. The program offers Morgan Stanley clients curated opportunities to magnify their philanthropic impact and make a real difference in the lives of millions of families who are impacted by the most devastating diseases. Dr. Stamler asserts, "There is no way to do what we do without philanthropy and the generous support of donors. We represent a real opportunity for donors to truly make a difference in the problems they're trying to solve."

In addition to raising dollars, the program will build a community of philanthropists, foundations, companies and family offices that share a common goal of eradicating disease. Donors to the community will gain access to established portfolios of potential treatments grounded in rigorous research, regular briefings and progress reports, and invitations to special events.

### About Morgan Stanley Global Impact Funding Trust (Morgan Stanley GIFT)

Morgan Stanley GIFT makes it simple for clients to establish a meaningful philanthropic strategy, make contributions and designate grants while receiving one comprehensive tax reporting statement. In operation since 2000, Morgan Stanley GIFT provides access to a Donor Advised Fund with more than 7,000 accounts collectively valued at nearly \$2 billion. Total grants to charity have exceeded \$1.7 billion since inception.

<sup>1</sup> [https://static1.squarespace.com/static/5a9eb0c8e2ccd1158288d8dc/t/5ac66afc6d2a732e83aae6bf/1522952963800/Tufts\\_CSDD\\_briefing\\_on\\_RD\\_cost\\_study-Nov\\_18,\\_2014.pdf](https://static1.squarespace.com/static/5a9eb0c8e2ccd1158288d8dc/t/5ac66afc6d2a732e83aae6bf/1522952963800/Tufts_CSDD_briefing_on_RD_cost_study-Nov_18,_2014.pdf)

<sup>2</sup> [http://www.nationalhealthcouncil.org/sites/default/files/NHC\\_Files/Pdf\\_Files/AboutChronicDisease.pdf](http://www.nationalhealthcouncil.org/sites/default/files/NHC_Files/Pdf_Files/AboutChronicDisease.pdf)

<sup>3</sup> <https://www.fastercures.org/assets/Uploads/VOD-TranslationalResearch2.pdf>

<sup>4</sup> <https://globalgenes.org/rare-facts/>

<sup>5</sup> <https://www.fastercures.org/about/fastercures/>

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The Morgan Stanley Global Impact Funding Trust, Inc. ("Morgan Stanley GIFT, Inc.") is an organization described in Section 501(c) (3) of the Internal Revenue Code of 1986, as amended. MS Global Impact Funding Trust ("Morgan Stanley GIFT") is a donor-advised fund. Morgan Stanley provides investment management and administrative services to Morgan Stanley GIFT.

While we believe that Morgan Stanley GIFT Cures provides a valuable philanthropic opportunity, contributions to Morgan Stanley GIFT Cures are not appropriate for everyone. Other forms of charitable giving may be more appropriate depending on a donor's specific situation. Of critical importance to any person considering making a donation to Morgan Stanley GIFT is the fact that any such donation is an irrevocable contribution. Back office administration is provided by RenPSG, an unaffiliated charitable gift administrator.

To learn more about Morgan Stanley GIFT Cures, contact your Morgan Stanley Financial Advisor.

