

State of the Foundation

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Good morning. I have a number of emotions being here today at my first Annual Conference as JDRF's CEO. I'm honored; honored to be able to serve in this leadership role for JDRF, a well-respected and powerful organization; an organization supported by so many passionate, enthusiastic, and talented people, both staff and volunteers. I'm also excited that JDRF is evolving in real time to become an even more **capable, efficient, innovative, and impactful** organization in pursuit of our mission. Most importantly, I'm hopeful and confident that we are moving into an era where JDRF's efforts will be responsible for directly transforming the lives of people with type 1 diabetes. I want to thank you for being here today to demonstrate your commitment and dedication to this fight that we've all joined together.

I've been very fortunate in life. At a relatively early age, I found myself at the right place, at the right time, working with the right people, and was able to start a couple of ventures that worked out pretty well for me and my family. As a result of that success, I had the amazing opportunity to step back and decide what I wanted to do with the rest of my life. My success provided me with the opportunity to do what I wanted with my life on my terms—or at least that's what I thought. I resolved that I'd dedicate the next phase of my life to philanthropic causes that I found interesting, and where I thought I may be able to make a difference. Type 1 diabetes wasn't anywhere on the list of things I was exploring. I was mostly thinking about issues like poverty in the developing world, issues that were very remote from my daily experience.

But my priorities and interests changed on September 19, 2002, when my son, Sean, was diagnosed with type 1 diabetes at the age of seven. As it turned out, I no longer

needed to put so much thought and energy into picking a cause to support. Like many of you here today, this cause picked me rather than me picking it.

In the hours and weeks after Sean was diagnosed, I did my research on all the players in the world of type 1 diabetes. I learned as much as possible about the disease, and I made some decisions about where to invest my time and give my financial support. JDRF emerged as the only organization that had the resources and the expertise to help my son and the millions of others living with type 1 diabetes.

And the unique culture of JDRF allowed me to get involved in a deep and meaningful manner not only across fundraising, but also research and advocacy—all the key aspects of what we do. As a volunteer, I logged as many hours for JDRF as I did with my start-up companies. And many of you in the audience know just what I mean, because I'm certainly not unique.

And just about this time last year, after Annual Conference, when I had served my full allowable term on the International Board of Directors for JDRF, I was presented with an opportunity to make a new level of commitment to JDRF, by transitioning from volunteer to CEO. I'll tell you, when I was planning my life back in 2002, I never thought I'd be where I am today. But I wouldn't want to be doing anything else with my time and energy, because I think JDRF is the organization that is going to have a big impact on my son's life. And in an unexpected way, I think my good fortune has held up because I have the rare and wonderful opportunity to say that my personal and professional goals are completely aligned. I want the same thing for my son that I want for JDRF: a cure that

removes this disease entirely from the lives of everyone; and on the way to that cure, better treatments that ease the burden of living with type 1 and provide a **safer, easier, and healthier** life for my son and others.

I know that's a goal I share with all of you. A goal set 40 years ago by other parents who have sons and daughters with type 1—parents who founded JDRF, one of whom is with us this morning, Carol Lurie. Thank you for giving us this community into which we can pour our labor, our passion, and our commitment into a shared mission of ridding the world of type 1 diabetes.

Since 1970, we've learned so much about this disease and JDRF has been the leader in this effort, whether through our direct funding of scientific research or by influencing the research spending of others. We've learned much about who is at risk for type 1 diabetes and how the disease progresses; we've defined the opportunities to intervene against it; we're developing and testing early versions of immune therapies, and cell replacement or regeneration technologies that will represent a cure some day; and on a relatively near-term time horizon, we now know what we can do today to help people live safer, easier, and healthier lives on the way to the cure.

Today, we stand on four decades of progress, a platform that has positioned us to have an even greater impact on the lives of people with type 1 diabetes than ever before. Through a focused and strategic effort that leverages both JDRF research spending and our ability to influence others, I believe we will transform the lives of people with this disease. That's why I'm here, and that's why I do what I do. But that will only happen because of the work all of you will do in the future—the work we will do together.

TRANSFORMING LIVES

If we truly mean to transform the lives of all those with type 1 diabetes, both children and adults...if we mean to do it by giving them healthier lives today as well as a cure tomorrow...if we mean to do it on an accelerated path, with real solutions available to them to improve daily living...then we must also transform how we work and how we fund that work.

1. **We will remain an organization that is dedicated to curing type 1 diabetes as our ultimate goal. But along the way, we will develop transformative treatments that enable people to live healthier, safer lives until we find that cure. We will also focus our efforts on ways to prevent type 1 diabetes from happening in the first place.**

At the end of the day, it's all about what we are doing for the person who lives with this disease. It's all about lifting the burden of type 1 diabetes.

I would define this burden in two ways.

The burdens of today: carb counting, blood testing, insulin dosing...the constant daily vigilance people with type 1 diabetes live with every hour of every day since that day of diagnosis, without respite, never a day off.

And the burdens of tomorrow: the fear of living with the disease for a long period of time and possibly developing complications that result from high blood sugar. And the worry that someone you love will develop the disease.

To lift these burdens, we must focus on both the today and the tomorrow.

- **We will focus on finding a cure for type 1 diabetes. JDRF will be in business until a cure is found.** At the end of the day, we want to cure this disease and remove it from the lives of our loved ones forever.
- **We will focus on the burden of living with type 1 diabetes today.** We want to succeed in getting better treatments and therapies to people with type 1 diabetes.
- **And finally, we will focus on preventing the onset of type 1 diabetes in the first place.** We want to reduce or eliminate the risk that individuals will develop type 1 diabetes.

Ultimately, what we're trying to do is restore normal physiology, to make the body work like it worked before a person had type 1 diabetes. Ideally, a cure could be a one-time, short-course drug therapy with minimal short-term side effects. One that reverses autoimmunity, restores beta cell function, and stops and/or reverses complications.

However, let's look at our reality. What we are trying to do is complex. We have made great progress, but there are still a lot of unknowns. And finding a cure for type 1 diabetes is a marathon, not a sprint. While we are no less committed to finding that cure than we were 40 years ago, a critical part of our mission is to keep those living with type 1 alive and healthy, so when a cure is ultimately found, they will not only be around, but also healthy and able to benefit from that cure.

We have the ability, however, in the relatively near future, to discover, develop, and deliver life-changing, transformational therapies that many, if not most, of our constituents—those children and adults living with type 1 diabetes—might even consider a cure.

These transformational therapies include things like encapsulated implantable islet cells. In other words, taking pig islets or stem cell-derived islets and protecting them in a membrane that would make sure they are protected from autoimmune attack. This approach allows us the luxury of not having to solve the autoimmune problem in people who may have been living with the disease for many years. Maybe those islets need to be replaced in a simple outpatient surgical procedure every 18 months. My son actually tells me he believes this would be a cure for him.

JDRF is prioritizing encapsulation research. You'll be hearing much more about a focused and strategic effort that leverages our own research spending, and our ability to convene the necessary collaborators across a range of disciplines, to influence their activities and accelerate progress toward concrete goals for patients.

Another example of a transformative treatment would be glucose-responsive insulin, an insulin that works when the body needs it. Think about it. An insulin that doesn't need to be calibrated with carbohydrates or with blood-glucose testing. One shot a day, and an individual would not need to deal with the burden of type 1 diabetes. I believe that this is a very exciting therapy, but we are still in the very early stages of the research and development process. And, as you can imagine, this therapy will need to be tested extensively to ensure that it does what we want it to do safely.

JDRF has developed an entire strategic program around fostering activity in this area. The proof of concept for one particular approach to this problem has been shown in animals. A few months ago, a company supported by JDRF for early-stage research on glucose-responsive insulins, Smart Cells, was acquired by Merck, which has committed to taking the company's technology forward.

What about an artificial pancreas? Some of you may have heard me talk about this. Although it is not a cure, the artificial pancreas will transform the ability of people to live safely with type 1 diabetes.

We have the technology today to create a first-generation artificial pancreas. Initial generations of such a device would use today's pumps and CGM platforms to do things like prevent the dangerous hypoglycemic events that people sometimes experience throughout the day or, more dangerously, when they are sleeping at night. This has been a particular challenge for our family. Within the last year, my adolescent son was playing a little fast and loose with administering his insulin around a midnight snack. He got sloppy, gave himself too much, and didn't wake up in the morning. He ended up in the ICU for 36 hours, not able to speak his name for a day. Luckily, everything rebooted and we are told that he doesn't have any lasting damage that can be measured. What's exciting is that JDRF is funding research on technology that would prevent what happened to my son from ever occurring again. It's real and it works, and it can be delivered to people soon. And JDRF will continue to play an extensive role here to aggressively influence the regulators to ensure this product is available to patients.

Additionally, we know that an artificial pancreas would not only benefit individuals today and help their daily management of the disease. We also know that an artificial pancreas will likely be an integral part of curing type 1 diabetes. Because we now know that high glucose is actually toxic to newly transplanted beta cells, an artificial pancreas will likely be needed to support transplanted or regenerated cells until they are stable and can function properly in the body. So this

treatment will in fact be a component of the cure in any likely scenario.

What about a vaccine that could prevent the onset of type 1 diabetes entirely? We now can identify individuals who are at risk for type 1 diabetes. And we can follow an individual's progression to becoming insulin-dependent. What if we could develop a vaccine that would slow or even prevent the autoimmune attack that precipitates type 1 diabetes? JDRF is prioritizing research to do just that. In fact, today there are significant efforts underway at JDRF to pursue different approaches to an eventual type 1 diabetes vaccine.

One of our founders, Carol Lurie, whose son has had type 1 diabetes for more than 40 years, believes prevention is part of JDRF's overall mission. Unfortunately, she now not only has a son but also a granddaughter living with type 1 diabetes. While no less committed to a cure, she wants prevention as well as better treatments to reduce the risk of complications for her son and granddaughter. In fact, "want" is not a strong enough word. She told me she expects it. And there is no one in the world besides my own mother that I would want to disappoint less than Carol Lurie. So that's what we are going to do!

These are exciting times. Science is unpredictable and challenging. And there are commercial obstacles that must be overcome to translate this science. But we are demonstrably in a different stage today in terms of what we can do—and what we can say about timing—than we have ever been in before.

I believe we have the opportunity to fundamentally transform how people live with type 1 diabetes in the next 10 to 15 years, advances that will improve patient outcomes and dramatically reduce the daily burden of living with the disease.

We will make significant progress in the search for the cure. We will accelerate getting to the day when anyone with type 1, or anyone at risk for developing it, will no longer have to live with the disease.

My belief and confidence in the indispensability of JDRF is what motivates me. It's the reason why I'm in this role,

and why I can proudly and confidently ask the community of people living with or affected by type 1 diabetes for their generous support.

II. We will be an organization that reaches individuals of all ages who are living with the burden of type 1.

We will do this because a diagnosis of type 1 diabetes can happen to anyone at any age. A toddler or a college student. A child or the mother of that child. As you heard last night, Michael White, one of our outgoing members of the International Board, had this disease come into his family when first his son, and then his wife was diagnosed with the disease. It can happen at any age. JDRF fights on behalf of every individual, at any age or life stage, who receives a diagnosis of type 1 diabetes. Everything we are doing across the highly interrelated areas of cure, treat, and prevent is applicable to everyone living with this disease.

Based on our market research, we learned that JDRF has the support of only a fraction of adults living with type 1 diabetes. In fact, the vast majority of adults with type 1 diabetes, who represent 85 percent of all those with the disease, have not found a home at JDRF. And we need to change that. This doesn't mean we are in any way less committed to children. It just means that we are embracing other people living with and affected by type 1 diabetes—those who haven't found JDRF appealing previously, but for whom we have a very compelling value proposition these days across our research portfolio of cure, treat, and prevent.

There is perhaps nothing that can match the passion and motivation of a parent who wants to help one's own child. And we've built a pretty good business, raising \$200 million in annual revenues, a figure that's primarily supported by parents of relatively recently diagnosed children. However, our recent market research with adults revealed that one of the most compelling aspects for them about what we are doing is preventing the disease in others, as much as it is about finding a cure for themselves. So it's the same passion for their children's futures that may inspire adults living with type 1 diabe-

tes to support us. We are the organization that is fighting on their behalf, and we need them to know it. Because we need their support.

We have made progress in reaching adults, and I'm confident that as we transform, we will continue to broaden our appeal and become increasingly relevant to individuals of all ages living with type 1 diabetes. But it's important to remember that this transformation is about growing our support among all groups: parents, kids, adults, and families. We will still be JDRF. We will just be JDRF to more people than we are today.

III. We will be an organization that defines success as the point at which advances reach patients.

As you heard yesterday, JDRF is broadening the areas in which we work to ensure that tangible research progress makes its way to patients.

In the past, I think we might have assumed that our role in the world was to simply fund basic or exploratory research in laboratories, mostly at universities. We might have hoped there would be a single big aha moment of discovery that revealed the secrets of type 1 diabetes. Unfortunately, we have learned over time that there isn't going to be a single big discovery. Instead, there have been and will continue to be dozens if not hundreds of aha moments. Each of those discoveries needs help to jump out of the laboratory and into, say, a start-up company. That small company, in turn, may need help moving the product they developed into the arms of a larger entity, one that can further develop it and support the cost of expensive clinical trials. And this larger company may need help defining a reasonable path to get this product through what has become an increasingly costly, unpredictable, and time-consuming regulatory environment. And the insurance companies may need help in understanding why a therapy should be reimbursed and made available to patients. Finally, the doctors themselves may need some help understanding which therapy will be able to best benefit a specific patient at a particular stage of type 1 diabetes.

At the end of the day, each of the steps that I mentioned may have obstacles or roadblocks that could prevent that aha moment in the laboratory from translating through to a patient in the doctor's office. It is JDRF's responsibility and obligation to remove the barriers that no one else will. So today, JDRF is influencing and investing financial resources at each of these steps, because that is what is required to successfully translate research advances into therapies for patients. That's why I believe JDRF is an indispensable organization. No other organization has the scale, expertise, and capabilities to intervene across that entire pipeline, from the laboratory to the patient.

When people ask me about potential timing for an artificial pancreas, a glucose-responsive insulin, encapsulated islets, or a vaccine that can prevent type 1 diabetes, I can't always be as specific as I'd like. I'm sure that is frustrating to you all. It's frustrating to me. But what I can tell you is that the timing I do talk about is when something is successfully translated to the patient, not when something works in a mouse, not when it's tested in monkeys, not even when it's tested in a limited number of humans, but when it is available in a doctor's office to every patient who can benefit from it. This is the timing in which I'm interested, and which we talk about when we plan and prioritize our activities and expenditures.

I'm excited about the expanded role JDRF is playing in translating research into therapies for patients. And I'm confident that all of us together can transform JDRF into the organization that will forever transform the lives of people with type 1 diabetes.

But playing this role costs more, and we need more funds to support that. To successfully translate 40 years of research progress into therapies that are broadly available and applicable to patients living with type 1 diabetes. To fundamentally transform life with type 1 diabetes in the next 10 to 15 years. To establish robust research programs and initiatives that will accelerate interventions for the prevention of type 1 diabetes. To continue to accelerate progress toward our ultimate goal of curing type 1 diabetes.

HOW WE WILL GET THERE

In order to transform the lives of people with type 1, we need to transform our ability to grow our support. And we need to increase our revenues so that we can effectively drive promising science from early-stage testing to delivery to the patient. Because at the end of the day, success will be defined when we have delivered meaningful benefits to the lives of people living with type 1 diabetes, and ultimately when we have rid this disease from their lives entirely.

We can't be forced to choose between transformative treatments that keep people healthy today and those that cure people tomorrow. People living with this disease need both improved lives today and a cure tomorrow.

When it comes to fundraising, we are an organization that has been very successful in the past. Others have looked to us and have been inspired by our innovations across our programs. We should be proud of JDRF's track record of success in raising money for research. However, maybe because of that historical success in fundraising, we haven't taken a really critical look at ourselves in a while, at least not since I've been around JDRF.

It's been a very long time since we took a really hard look at our business, not just how we are structured, but also what tools and resources we need to provide to our people, both staff and volunteers, so that we all can be the most successful we can be in our roles.

It's been a long time since we really confronted the question of where we need to invest to build a solid foundation upon which we can grow in the future. It's been a long time since we listened to our donors and made a commitment to giving ourselves the ability to communicate with them in a way that they prefer, not in a way that is simply easier for us.

We need to invest so that we can build a solid foundation, but that investment can't simply be limited to adding expenses and personnel if we are truly to become an organization capable of the kind of growth we seek. That would neither be transforming, nor would it be sustainable. We must build an organization that maintains growth while continuing to value a high level

of efficiency. We must create an organizational strategy backed up with the right investments.

I have a big vision for what JDRF can become. It's going to take a little longer than I wanted to or thought it would take when I first took this job. But we are going to get there in a measured and thoughtful way that allows us to bridge to our future, without putting current revenues at risk.

And every aspect of transformation will be put through a single filter: Does it support our ability to accelerate our efforts to transform the lives of people living with type 1 diabetes? Because that's what we are here to do. That's what I'm committed to achieving. And I'm confident we will reach this goal together.

CONCLUSION

For many of us here, the first time that type 1 diabetes touched us can only be described as a life-changing event.

Everything changed from that day forward. For us as individuals. For us as families. For us as parents, spouses, siblings, relatives, and friends.

And every one of us knows that the word "change" is inadequate to describe what we've faced and will face. However, just as our families were challenged to change in order to successfully live with this disease, I believe the same is true for what we need to do as an organization in the future.

At JDRF, we've worked very hard to change the lives of people with type 1 diabetes. And we have a lot to show.

But we recognize that people with type 1 diabetes—and the people who they touch—need more than change from our organization...they need transformation. They deserve transformation.

And JDRF will help give them what they need. We can help transform their lives.

The lives of those at risk for type 1. The lives of those newly diagnosed. The lives of those who are living with type 1. And the lives of those who love them. Including me.

We are the only organization that can do this for people who are living with type 1 diabetes.

Why am I so confident in JDRF?

The reason is simple. Because I am confident in us— all of us who are part of JDRF. Because I know that by transforming what each and every one of us does for JDRF will allow us to succeed in transforming the lives of people with type 1 diabetes.

JDRF must move forward to transform lives. We must move forward to make a greater impact. We must move forward because adults and children with type 1 diabetes need us to transform how they live with this disease.

What does transforming mean to me personally? As I said earlier, my son Sean, who is 16, was diagnosed with type 1 diabetes at age seven. This means that he has been living with the disease for more than half of his life. I look forward to the day, soon, when he will lead an easier life, when the daily burden of living with this disease is substantially lessened, and when I don't have to worry about him at night—or at least not because of diabetes.

I am committed to transforming what our organization does in order to make this happen for my son—for everyone's sons, daughters, fathers, mothers, brothers, and sisters—all of their loved ones living with the burden of type 1 diabetes.

I am confident that we can all work together to raise money to support the research needed to transform lives. We have come so far. We have achieved so much. We will build on our accomplishments to ensure that our loved ones and future generations have better treatments, successful prevention, and ultimately a cure for type 1 diabetes.

As the CEO of JDRF and a father of a child with type 1 diabetes, I thank you for being here today and for all you do for JDRF.