

# INVESTING IN A LIFE MORE

*beautifully* ordinary

**JDRF** IMPROVING  
LIVES.  
CURING  
TYPE 1  
DIABETES.

Three research portfolios to speed up  
changing daily life with type 1 diabetes

“  
I want to be able to pick up my twins from school and not find the first thing coming out my mouth is “Hello you, are you ok? Did you have any hypos today?”. I want to ask about their spelling test, if they won at rounders, what the new teacher’s like... ”

### What would the best thing be about a more ordinary life?

We all know that type 1 diabetes makes the most ordinary things in life into a big, difficult deal. Letting an excited child go on a sleepover can be a frightening thought. Fitting in at secondary school is harder than it should be. That first date means consulting a book for carbs and portion advice, and talking about type 1 for half the evening. Waving a teenager off on a boozy freshers’ week at university becomes a heart-thumping prospect. Researching holidays has to take in how good local hospitals are. Starting a new job comes with an extra level of nerves: ‘what if I have a hypo on my first day?’

Type 1 sucks up energy, headspace and pleasure. We must bring the day forward when daily life can be beautifully ordinary again. And that is going to mean speeding up the pace of research and clinical trials.

Our new Accelerator Programme will do this.

### Three research portfolios for your consideration

**The Accelerator Programme** is a new way of approaching type 1 research and supporting our groundbreaking, international research programme, which has been consistently involved in the developments and breakthroughs that are improving lives and curing type 1 since 1970.

By investing in one of three strands of research, with upwards of £25,000 p.a. for four years, you can now have more impact than supporting just a single project.

**The Improvement Portfolio** is low risk and should, within one to five years, make current technologies for managing type 1, or which are arriving soon, much better, and available on the NHS.

**The Transform Portfolio** is medium risk but should, within five to 15 years, bring a paradigm shift in how people live with type 1 in daily life. Some of this research is already in clinical trials, but it needs a boost now in order to get it over the finish line and into people’s lives more quickly.

**The Eradicate Portfolio** is higher risk, and we need to come at it from many directions, with some areas of discovery only just being revealed now. But in the longer term, it will stop type 1. Cure it. So you never have to think about it again.

### How will investing in the Accelerator Programme bring forward change?

Research is, by its very exciting nature, an exploration. In our hands though, it is one with a clear direction and anticipated well-defined milestones on the way to a cure.

Imagine an already good road, transformed into a three-lane superfast motorway. This is what the Accelerator Programme will do for finding solutions to type 1.

It will deliver more life-changing improvements in people’s lives faster.

First, it will enable us to act as a ‘fund manager’ of your investment in a whole portfolio, turning the heat up under projects that are yielding strong results. This will include getting more solutions into clinical trials and approved by the NHS.

Secondly, this model will enable us to fund, not just these core research projects, but also extra initiatives we haven’t been able to fund before, that will enhance and magnify the power of our research strategy.

### Tell me more

The following pages outline the three portfolios for your consideration. We’d appreciate hearing what you think about this new model for supporting research. And we can of course provide you with a more detailed proposal for any aspect about which you would like to know more.

“

I don't want to be thinking at work about my son feeling he has to go and hide in the toilet at school to test and inject. I want to think of him finding his feet on the rugby pitch, chatting up girls, feeling confident...

”

## The Improve Portfolio

The ways we have right now for managing type 1 diabetes – or which are almost ready – could be made available more quickly if you invest across this low-risk portfolio.

### How we'd invest your money

- **Completing the artificial pancreas project**

We are on the brink of having one small device that will lift the burden of type 1; giving more control, more sophisticated insulin delivery with less worry and better results. With continued, secure funding we can build the evidence to show this technology can improve life with type 1 significantly, as well as developing ever more sophisticated systems that can one day take over managing every part of type 1, automatically, day and night.

- **Enabling doctors to say 'yes, you can get this new bit of kit on the NHS now'**

You'll also be helping us to work with the UK's healthcare regulators and budget holders, scientists and industry to get treatments delivered through the NHS. Then people can go and see their doctor and come home with new and innovative technologies, irrespective of whether they have the means to pay or not.

### Initiatives to enhance and magnify the whole portfolio:

- The ability to support data gathering for the UK's regulatory and reimbursement bodies and engage with them about the difference new treatments could make on the lives of people with type 1.
- To bring in new expertise to JDRF to drive our patient access programme, speeding up getting new ways of managing type 1 into everyday life.



#### Timeline:

One to five years



#### Investment needed:

£2m over four years

## Imagine being able to sleep at night

'I'm always saying, "Have you tested, have you tested?" I test the twins before we go to bed. If someone's low, I give them jelly babies and then set my alarm for two hours' time to get up and check if it's worked,'. It's a familiar, exhausting story to any parent of a young child with type 1.'

Dr Roman Hovorka from the University of Cambridge leads one of the artificial pancreas teams in the Improve Portfolio. He is working on a solution that will give people with type 1 automated, safe and consistent blood glucose control. Now our opportunity is to finish the job, and get an excellent device out into people's lives on the NHS.

By investing in the Improve Portfolio, you can spearhead all of this.

“

I want to be able to wave my daughter off on a gap year, without having sleepless nights that she's having a massive hypo up a mountain in India. I just want to worry about the normal stuff – losing her passport, getting her bag stolen.

”

## The Transform Portfolio

Invest across the medium-risk projects within this portfolio to bring a paradigm shift in the daily lives of families living with type 1 within the next five to 15 years. While type 1 will still be there, you'll hardly have to think about it.

### How we'd invest your money

- **Reducing hypoglycaemia, day and night**

Anxiety, sweating, tiredness, loss of concentration, blurred vision, even coma – everyone fears a dash to hospital under a flashing blue light with a severe hypo. Yet on average children and adults in the UK with type 1 have 10 hypos a week – at home, school, university, or at work.

Your investment would be used to tackle hypos from a number of directions. For example, using drugs to reset the brain chemistry of someone who's lost the ability to feel a hypo coming on, so they can take action quickly.

- **Once-a-day injection or pill that completely takes care of everything**

A 'smart' or glucose-responsive insulin would be a game-changer. One dose of glucose responsive insulin in the morning, and then the insulin automatically activates and deactivates to match the rise and fall of blood glucose. One project we've funded is now in clinical trials. More investment would enable other teams working on this to move faster and push through clinical trials too, making sure this transformative concept has the best chance of making it to real-world use as soon as possible.

### Enabling people to produce their own insulin again

By pushing faster to encapsulate insulin-producing islets in the pancreas, we believe we can stop the immune system attacking them again, so people's bodies can get back to working normally. We have already begun clinical trials with some of these products, but we need to ramp up this area of research.

### Initiatives to enhance and magnify the whole portfolio:

- Small conferences to cut across research silos and create 'lightbulb moments' among scientists who work in different but related areas.
- Innovation awards to support the lift-off of some really smart new ideas, funding researchers to get enough data to see if their idea is promising enough to pursue further.
- Industry grants to boost our success in encouraging biotechnology and pharmaceutical companies to prioritise type 1 opportunities for further big investment.



**Timeline:**  
Five to 15 years



**Investment needed:**  
£5m over four years

## Imagine not worrying about hypos and complications

'On numerous occasions I couldn't get through to my daughter after a message saying she'd had a major hypo at university. I worried she'd become unconscious and had to get the porters to break into her room. Glucose responsive insulin would be amazing because it would allow for really tight blood glucose control even when life is a bit chaotic and hormones and emotions are going up and down.'

Invest in the Transform Portfolio and your contribution can also hasten getting more transformative ideas into clinical trials and out into people's lives to end hypos and complications forever.

“  
I want to throw away all  
the gadgets. For counting.  
Dosing. Keeping me alive.  
And just get back to a  
beautifully ordinary life.”

## The Eradicate Portfolio

Throw away the gadgets and drugs and get back to normality: this is the prize for the higher-risk Eradicate Portfolio. No more type 1, no more fear, no more medicine, no more anything. Just the beauty of a life without type 1 in it at all.

### How we'd invest your money

- **Getting everyone producing their own insulin again**

This is at the core of our mission. It is what we were set up to do and what we will achieve. And it's quite simple: with more money, we will get there faster.

By investing in the Eradicate Portfolio you would be supporting immunotherapy research aimed at 'retraining' the immune system to halt type 1 in its tracks.

And uncovering the complex genetic basis of type 1, building a genetic map and improving our understanding of how type 1 associated genes interact with each other, and the environment.

You would also be supporting trials tracking large populations of people with type 1, revealing more about the triggers of the condition and gathering samples to create a vast data resource for researchers in search of answers about type 1 risk and development.

- **Stopping type 1 ever starting in anyone at risk**

Support the Eradicate Portfolio, and you will be standing shoulder to shoulder with teams uncovering what causes type 1; identifying those at risk and reducing that risk to zero; and ultimately in returning those living with type 1 to ordinary life again.

### Initiatives to enhance and magnify the whole portfolio:

- Type 1 research is surging forward. But we have to invest in the next generation of researchers to make sure that there will be a scientific workforce specialising in type 1 to take it forward to its conclusion: cure and prevention.

Investors in the Eradicate Portfolio will be supporting clinical training fellowships, early investigator awards, and awards that sustain long careers in type 1 research for the best and brightest scientists and clinicians.



**Timeline:**  
10 years+



**Investment needed:**  
£8m over four years

## Bring forward the day you can throw away the ping pong ball

'Life with type 1 is like trying to walk round all day holding a ping pong ball in the flat of your hand and not dropping it. You're always trying to manage the numbers for your glucose and your insulin! The idea of running into complications later on and losing my eyesight because of type 1 scares the hell out of me. But JDRF has given me a lot of positivity and hope.'

## **The personal made global**

### **Investing in the Accelerator Programme will help change daily life with type 1 – faster**

Improvements to today's ways of managing type 1 will come within the next one to five years. Transformational new ways of taking care of it, which require little effort, should come in the next five to 15 years. And cutting edge research being done now is bringing a world without type 1 even closer.

That's if the investment in this work is put in now, over the next four or five years, allowing us to fund more of the work we need to do than we can afford to right now.

**It's quite startling when you think about what that means.**

A boy with type 1 who is eight now could be going off on a gap year at 18 with nothing more to keep him well in his backpack than a pill a day, prescribed by his GP.

A young woman who can no longer drive because she can't feel hypos coming on, could be hypo-free by the time she's 35, dropping her child at school on her way to work.

When you're in the thick of managing type 1, the future can seem a long way off.

But research has moved so incredibly fast in the last 30 years and with more investment, this future will come faster. For you and yours. And for people across the UK and internationally.

**And when it does come, so will the return of a life more beautifully ordinary.**

**Will you join us in making this happen sooner?**

**For more detail on the Accelerator Programme:**

Call 020 7713 2030

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