

INVITATION TO JOIN RESEARCH PROGRAM ON DIABETES REVERSAL

EMPOWERING PEOPLE TO LIVE HEALTHIER LIVES



TNO innovation
for life

Nearly 1 million people in the Netherlands suffer from Type 2 Diabetes (T2D). And an average of 55,000 people per year are diagnosed with it. Everyone with T2D must deal with its effects on their daily lives, including their ability to work.

Current T2D treatment focuses on care – primarily medications and insulin – and not on reversal. This treatment paradigm has serious financial and social impact. We know there is a sustainable – and financially beneficial – alternative. To enhance citizen health, TNO and Leiden University Medical Center (LUMC) are working towards solutions to reverse T2D.

REVERSING DIABETES

Evidence shows that significant lifestyle changes not only help control T2D, but can even reverse the disease. In addition to improving patients' quality of life, TNO and LUMC envision that this will enable an entirely new business model. As the tools and methods for diabetes reversal continue to be established, a broad diversity of stakeholders – from healthcare professionals to pharmaceutical companies to food delivery services to IT

professionals – can stake their claim in the emerging market of Lifestyle as Medicine.

VISION FOR THE FUTURE

Sustaining a significant lifestyle change is not easy. The majority of people with T2D do not have the resources or information to affect change. But with the help of healthcare professionals, lifestyle apps and inspirational trainings, the Lifestyle as Medicine initiative can impact millions of lives and stimulate millions in revenue. And together, partners in the program can take the first steps towards eliminating T2D in the Netherlands, and around the world.

PROOF OF CONCEPT

Throughout the Netherlands, we already see small-scale programs that help people manage – or reverse – their T2D through lifestyle changes. One such pilot



program, at LUMC, focused on intensive training and lifestyle coaching for people with T2D taking up to 90 units of insulin per day. After 21 days in the pilot program, 10 out of 11 participants had stopped taking insulin. TNO and LUMC see a huge opportunity to broaden this impact by developing new tools and treatments to eliminate T2D in the Netherlands.

PARTNERING FOR CHANGE

TNO and LUMC have established a collaborative program to reverse diabetes. The program consists of research and development, implementation and education. A major objective of the program is to understand the physiological changes in the individuals with T2D who engage in lifestyle change. We will study and improve the methods and tools needed to support these people in their efforts to change. That includes tools and models for healthcare professionals so that they can understand and support T2D reversal. Our public-private partnership is searching for partners to participate in this program, and to take part in realising entirely new Lifestyle as Medicine business models for T2D, which can then be applied to other lifestyle-related disorders.

VESTED INTEREST

Of course, healthcare professionals, pharmaceutical companies and insurers have a direct stake in developing more

sustainable cures for T2D. But lifestyle coaches, IT companies, delivery services, retailers and trainers can also play a significant role. Even employers whose workers are more prone to T2D – such as in the offshore, public transport and trucking industries – can benefit from contributing to the development of a cure that gets workers out of the sickbed and back on the job.

BENEFITS FOR THE PATIENT AND SOCIETY

Reducing the prevalence of T2D in the Netherlands would undoubtedly have a tremendous impact on the lives of the nearly 1 million people who currently suffer from it. With their renewed energy, lower financial burden and reduced health issues, they can (return to) work and actively contribute to society.

The financial benefits of the diabetes reversal program are staggering. Conservative estimates show that lifestyle changes can reverse T2D in at least 40% of cases (source: Vintura). Translated into estimated cost savings, this would be in excess of €2.7 billion in the next five years. Society will benefit from the resurgence of workers who are well enough to return to work. Moreover, the tools and methods developed during the program can provide a new revenue stream for participating partners.

TNO.NL

TNO HEALTHY LIVING

TNO initiates technological and societal innovation for healthy living and a dynamic society.

TNO
 Utrechtseweg 48
 3704 HE Zeist
 Postbus 360
 3700 AJ Zeist
 The Netherlands

Wim van Hartingsveldt
 T +31 (0)88 866 17 30
 E Wim.vanhartingsveldt@tno.nl