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Message from CEO

Dear Members of TDC Community,

I am delighted to extend a warm welcome to you as we launch our research newsletter 'TDC Insights'. In our dynamic and ever-evolving field of healthcare, staying at the forefront of innovation and research is not just a choice; it is our responsibility to ensure the best possible care for our patients and communities.

As we navigate the complexities of healthcare in the 21st century, research becomes the compass guiding our decisions and actions. Our commitment to advancing medical knowledge, improving patient outcomes, and driving positive change remains unwavering.

This newsletter serves as a platform to showcase the dedication and expertise of researchers and clinicians who tirelessly pursue answers to some of the most pressing questions in healthcare today. From ground breaking discoveries to innovative approaches to patient care, each update reflects a relentless pursuit of excellence.

I encourage you to explore this newsletter and immerse yourself in the exciting research endeavors happening outside and within our organization. I believe you will find these articles both enlightening and inspiring. The knowledge shared here has the potential to transform lives, and it is my hope that it sparks new ideas, collaborations, and innovations across our healthcare community.

I want to express my deepest gratitude to all those who contribute to our efforts. Your contributions are invaluable, and they drive us forward. Together, we are making a difference, and together, we will continue to lead the way in healthcare excellence.

Warm regards,

Meesaq Arif,
CEO, The Diabetes Centre, Inc.

Featured Research

Weekly Icodec versus Daily Glargine U100 in Type 2 Diabetes without Previous Insulin

Study finds Weekly Treatment more Effective than Daily Injections

A recent study conducted a 78-week randomized, open-label, treat-to-target phase 3a trial involving adults with type 2 diabetes who had not previously received insulin. Participants were randomly assigned in a 1:1 ratio to receive once-weekly insulin icodec or once-daily insulin glargine U100. The primary end point was the change in the glycated hemoglobin level from baseline to week 52; the confirmatory secondary end point was the percentage of time spent in the glycemic range of 70 to 180 mg per deciliter (3.9 to 10.0 mmol per liter) in weeks 48 to 52. Hypoglycemic episodes (from baseline to weeks 52 and 83) were recorded. Each group included 492 participants and the results of the study concluded that the glycemic control was significantly better with once-weekly insulin icodec than with once-daily insulin glargine U100.

Mediation analysis of the testosterone treatment effect to prevent type 2 diabetes in the Testosterone for Prevention of Type 2 Diabetes Mellitus trial

In this study, a novel, intuitive method of mediation analysis was applied to randomized placebo-controlled clinical trial to determine if the testosterone treatment effect on glycaemia is mediated through changes in total fat mass, abdominal fat mass, skeletal muscle mass, non-dominant hand-grip, oestradiol (E2), and sex hormone-binding globulin (SHBG). It was found that at least part of the effect of testosterone to reduce diabetes risk was mediated through changes in fat mass, abdominal fat, skeletal muscle mass, grip strength, SHBG, and E2. Of the mediators investigated, the largest contributor to mediating the testosterone effect on glucose was change in fat mass. The study could not rule out effects of muscle that may have been sensitive to diet-induced weight loss and were not dependent on mass or strength. It is likely that there are other pathways that mediate

the effects of testosterone requiring further investigation.

An implantable device could enable injection-free control of diabetes

The device contains encapsulated cells that produce insulin, plus a tiny oxygen-producing factory that keeps the cells healthy.

MIT engineers have designed a new implantable device that not only carries hundreds of thousands of insulin-producing islet cells, but also has its own on-board oxygen factory, which generates oxygen by splitting water vapor found in the body. The researchers showed that when implanted into diabetic mice, this device could keep the mice's blood glucose levels stable for at least a month. The researchers now hope to create a larger version of the device, about the size of a stick of chewing gum, that could eventually be tested in people with Type 1 diabetes.

Spotlight on Scientist

Anne Peters, M.D., is Professor of Medicine at the Keck School of Medicine of USC and Director of the USC Clinical Diabetes Programs. Dr. Peters earned her medical degree from the Pritzker School of Medicine at the University of Chicago and performed an internal medicine residency at Stanford University and an endocrinology fellowship at Cedars-Sinai Medical Center. She previously directed the clinical diabetes programs at Cedars-Sinai and UCLA. Her research has focused on testing new approaches for diagnosing and treating diabetes and developing systems of care to improve outcomes in diabetic populations.

She has published over 200 articles, reviews, and abstracts and three books on diabetes. She has been an investigator



on over 40 research studies and has spoken at over 400 programs throughout the US as well as internationally. She has served on many committees for the ADA and other organizations. Currently she is the chair of the Endocrine Society Committee on Diabetes Devices and is on the EASD/ADA Technology Safety Committee. Additionally, she is a member of the JDRF Panel on Management of Exercise in Type 1 Diabetes. She is a member of the ABIM Endocrinology Subspecialty Board. She consults for many entities, including the FDA, Optum Rx and CVS/Caremark to help guide the development and use of treatments for diabetes. Her many publications can be found [here](#).

Upcoming Events

59th EASD Annual Meeting 2023

02-06 October 2023 in Hamburg, Germany and online.

Connect with the global diabetes community, hear the most recent studies, and join stimulating symposia and lectures at this event for the **European Association For The Study Of Diabetes (EASD)**.



3rd Global Meeting on Diabetes & Endocrinology

November 27-28, 2023
Dubai, UAE

Theme: Modern medical research and application on diabetic condition & endocrinology function.

Research Resources

Nature announces support for authors from over 70 countries to publish open access

Authors from low-income and lower-middle income countries, including Pakistan, to be able to publish for free in *Nature* and the *Nature* research journals.

In January 2023, Nature announced that primary research from authors from over 70 countries classified by the World Bank as low-income (LIC) or lower-middle-income economies (LMICs) accepted for publication in either Nature or one of the Nature research journals (e.g., Nature Chemistry, Nature Sustainability) can now be published Gold open access at no cost. This move recognises that local funding is rarely available for publishing Open Access (OA) in specialist journals like Nature, whose characteristics such as in-house editorial teams and low acceptance rates make it difficult for authors from these countries who are less well-funded.

A key part of this initiative is that authors will not need to ask to benefit from the support. Corresponding authors from qualifying countries whose primary research papers are accepted in principle (AIP) for publication in these titles will be informed as part of the publishing process that their paper will be published gold OA, with the APC covered by Springer Nature. Authors can opt out if they do not wish their papers to be published OA.

Feedback

We are excited to hear from you. Please send us your feedback at rc@tdc.com.pk

“Prior to penicillin and medical research death was an everyday occurrence. It was intimate”.

Katherine Dunn