Journal of Diabetes Science and Technology
Volume 1, Issue 1, January 2007

EDITORIAL

Journal of Diabetes Science and Technology and the Diabetes Technology Community

David C. Klonoff, M.D., FACP
Editor-in-Chief

Colonel Karl E. Friedl, Ph.D.
Gerold M. Grodsky, Ph.D.
Lutz Heinemann, Ph.D.
Associate Editors

Welcome to Journal of Diabetes Science and Technology (DST) (*www.journalofdst.org*). This bimonthly peer reviewed electronic journal closely covers the field of diabetes technology. DST is published by Diabetes Technology Society, a non-profit organization, based in Foster City, California. The mission of DST is to produce a high quality journal that is: 1) the meeting ground between the science and practice of diabetes and technology; 2) the premiere source of information focused on diabetes and technology; and 3) the catalyst to advance development and utilization of new technologies to help people with diabetes.

Journal of Diabetes Science and Technology is backed by an outstanding Editorial Board of scientists, clinicians, and government regulators to review articles and advise the editorial staff. It is noteworthy that such major United States government agencies as the Army, Centers for Disease Control and Prevention (CDC), Department of Veterans Affairs (VA), Food and Drug Administration (FDA), National Aeronautics and Space Administration (NASA), National Institutes of Health (NIH), National Space Biomedical Research Institute (NSBRI), and National Science Foundation (NSF) are all represented on the Editorial Board. Each of these agencies or organizations deals with maintaining health or developing technology for their constituents. The technologies that are being closely covered by DST relate to the 21 million Americans, and the 250 million people worldwide with diabetes. When administrators of these agencies or organizations look to acquire improved metabolic monitoring, physiologic modeling, or remote data transmission capabilities, they are increasingly turning to the diabetes technology community, and DST presents the advances that are emerging from this scientific community.

Journal of Diabetes Science and Technology is supported by a Clinical Advisory Board, as well. This group of international experts in clinical applications of diabetes technology, based in the US, Europe, and Australia, reviews clinical articles and advises the editorial staff. This Board will be particularly active in identifying topics for the journal's regular section on "Clinical Applications of Diabetes Technology."

DST presents the latest information about developments in diabetes technology from basic science to clinical applications. Diabetes science refers to performing research or making observations to understand the abnormal physiology of diabetes and discover opportunities for treating this disease. Diabetes technology refers to applying scientific principles or utilizing practical experience to create tools for people with diabetes and develop products for fighting this disease. DST emphasizes the spectrum of technologic applications derived from the physical sciences, which can be used to treat, monitor, diagnose, or prevent diabetes. At one end of the journal's spectrum are basic science articles written by engineers, chemists, physicists, and other physical scientists. These scientific articles cover physical principles and relationships that can be utilized to develop products. At the other end of the journal's spectrum

Corresponding Author: David C. Klonoff, M.D., FACP, Diabetes Research Institute, Mills-Peninsula Health Services, 100 South San Mateo Drive, Room 3124, San Mateo, CA 94401, Phone: (650) 696-4206, Fax: (650) 696-4269; email address *dklonoff@yahoo.com*

J Diabetes Sci Technol 2007;1(1):1-2

are clinical trial articles written by physicians, nurses, pharmacists, and other healthcare providers. These articles cover the outcomes and potential benefits of investigational devices and drugs that can mimic or improve upon natural systems to compensate for the abnormal metabolic pathways that characterize diabetes. DST covers all forms of diabetes technology including: glucose monitoring; insulin and metabolic peptide delivery; artificial and bioartificial closed-loop control systems, telemedicine; software for modeling; physiologic monitoring; technology for managing obesity; diagnostic tests of glycation; and the use of bioengineered tools such as MEMS, new biomaterials, and nanotechnology to develop new sensors and actuators to be applied to diabetes. DST supports the mission of Diabetes Technology Society, which is to promote the use of science and engineering in the fight against diabetes.

In DST, peer review of original articles and review articles is conducted by leaders in the field from academia, government, the non-profit sector, and industry. Commentary articles are published to express opinions about problems in diabetes technology, and their general format is to describe where we are, where we are going, and how we need to get there. Authors are asked to disclose potential financial conflicts of interest.

DST contains a regular section on scientific and clinical developments in Obesity Technology, co-edited by Karl Friedl, Ph.D. from US Army TATRC, Fort Detrick, Maryland (Scientific Editor) and Frank Greenway, M.D., from Pennington Biomedical Research Institute of Louisiana State University (Clinical Editor). Diabetes Technology Society believes that technology will play an important role in reversing the global trend toward obesity and resultant type 2 diabetes. In the first issue of DST, this section contains a report about the NSF/NIH Workshop on Engineering Approaches to Energy Balance and Obesity: Opportunities for Novel Collaborations and Research, which took place in June, 2006 in Virginia.

DST includes a section entitled, "Clinical Applications of Diabetes Technology." In the journal's first issue, David Rodbard, M.D. has launched this section with an article entitled "Optimizing Display, Analysis, Interpretation and Utility of Self-Monitoring of Blood Glucose (SMBG) Data for Management of Patients with Diabetes." DST includes a section entitled, "Controversies in Continuous Glucose Monitoring" to highlight the scientific, clinical, and economic growing pains that are accompanying the adoption of continuous glucose monitoring, which promises to revolutionize diabetes management. This section is co-edited by Bruce Buckingham, M.D. from Stanford University and Stuart Weinzimer, M.D. from Yale University. In the journal's first issue, James Nichols, Ph.D. and David Klonoff, M.D. have launched this section with an article entitled "The Need for Performance Standards for Continuous Glucose Monitors."

DST features a column entitled "Diabetes Computing & Internet Watch," which is edited by Eldon Lehmann, M.D., Ph.D. from University of Toronto. This column alternates with a section entitled, "Diabetes Vascular and Neurologic Technology," which is edited by Thomas Forst, M.D. from University of Mainz. DST will publish the Proceedings of the world's two most important meetings devoted to diabetes technology, the Diabetes Technology Meeting every Fall and the Clinical Diabetes Technology Meeting every Spring, as well as reports from meetings around the world.

Journal of Diabetes Science and Technology is the world's first completely electronic journal devoted to diabetes. To provide quick access to back articles, DST sends subscribers a CD-ROM with the Table of Contents printed on the jacket for each issue of the journal. In this way, DST offers both the rapid turnaround time of a completely electronic journal as well as the archiving capability of a print journal. By publishing in an electronic format, it is possible to present letters to the editor online on the journal website with very little delay.

We expect that DST will be occasionally controversial, frequently enlightening, and often entertaining. We hope that you will enjoy DST and will read it regularly. We invite you to submit an original article, a review article, a Commentary article, or a letter to the editor on a topic of diabetes science or technology. Journal of Diabetes Science and Technology is an electronic meeting place for the ever-expanding diabetes technology community. Together with our authors and readers we will advance the field of Diabetes Technology.