



Journal of Diabetes Research

Special Issue on  
**Sensor Augmented Pump Therapy**

# CALL FOR PAPERS

Insulin pump therapy has been available as a treatment modality for type 1 diabetes for the past three decades. Real-time continuous glucose monitoring (RT-CGM) represents a revolutionary approach in glucose monitoring. Integration of these two technologies, also known as sensor augmented pump (SAP) therapy, has the potential to increase the benefits seen with either device alone. RT-CGM allows glycaemic monitoring in a more dynamic manner and the glycaemia trends observed may enable patients to use this piece of information for insulin pump dose adjustments and meal decisions. Recent SAP devices are equipped with LGS (Low Glucose Suspension) and PLGM (Predictive Low Glucose Management) algorithms, shown to reduce the risk of severe hypoglycaemia.

Current use of SAP therapy however still presents many challenges for patients and healthcare providers. Development of more reliable and accurate RT-CGM sensors is ongoing. SAP with advanced control algorithms are being utilised in experimental clinical studies at present to automate glucose control, as part of an artificial pancreas (closed-loop) system. Further improvements of educational strategy and qualitative analysis are required to support compliance and usability of these technologies.

We invite investigators in the field to contribute original research articles as well as review articles that will stimulate continuing efforts to further improve the potential of SAP therapy, which represents the road map towards future closed-loop systems.

We particularly call for articles describing new modalities of noninvasive as well as invasive glucose measurements, in silico glucoregulatory modelling, and closed-loop control algorithms.

Potential topics include, but are not limited to:

- ▶ Glucose sensors development
- ▶ Developmental research on pharmacotherapy or materials utilised in SAP therapy (ultra-rapid-acting insulin, novel infusion sets, insulin delivery systems, etc.)
- ▶ Latest technologies and modalities to clinically evaluate SAP therapy outcomes
- ▶ Development of smart phones application or other information technology platforms to support self-management in patients using SAP therapy
- ▶ Development of in silico models assessing glucose sensor performance or closed-loop application
- ▶ Hypoglycaemia prevention and management utilising SAP in those at risk (i.e., hypoglycaemia unaware patients)
- ▶ Psychological issues related to SAP therapy
- ▶ Strategies to optimize educational and psychological input to maximise SAP therapy outcomes

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jdr/sapt/>.

## Lead Guest Editor

Katerina Stechova, University Hospital Motol, Motol, Czech Republic  
[katerina.stechova@lfmotol.cuni.cz](mailto:katerina.stechova@lfmotol.cuni.cz)

## Guest Editors

Hood Thabit, University of Cambridge, Cambridge, UK  
[ht312@medschl.cam.ac.uk](mailto:ht312@medschl.cam.ac.uk)

Lalantha Leelarathna, University of Manchester, Manchester, UK  
[lalantha.leelarathna@cmft.nhs.uk](mailto:lalantha.leelarathna@cmft.nhs.uk)

## Manuscript Due

Friday, 17 June 2016

## First Round of Reviews

Friday, 9 September 2016

## Publication Date

Friday, 4 November 2016