

## Analysis: On the Path to Overcoming Glucose-Sensor-Induced Foreign Body Reactions

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### Abstract

It is generally accepted that unreliable *in vivo* performance of implantable glucose sensors originates, in large part, from tissue reactions to the implanted sensor, including foreign body reactions (i.e., inflammation, fibrosis, and vessel regression). Development of glucose sensor coatings with increased biocompatibility would contribute to the development of a reliable long-term glucose sensor. In this issue of *Journal of Diabetes Science and Technology*, Van den Bosch and coauthors report on their initial *in vitro* results on a candidate biocompatibility coating for sensors (silica nanoparticle- polyethylene-glycol-based coating). Although the initial standard testing is encouraging, it is important that sensor-specific testing protocol be utilized to more accurately predict sensor performance *in vivo*. The development and application of sensor-specific testing standards will likely speed the development of biocompatible coatings that will increase sensor accuracy and lifespan in the future.

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**Abbreviations:** (CGM) continuous glucose monitoring

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