

Capillary Biomedical Sheds Light on the Mechanical Challenges of Insulin Pump Delivery Systems at Annual ADA Scientific Sessions

SAN DIEGO, Calif. – June 13, 2017 – Medical device developer Capillary Biomedical, Inc. unveiled the first results of its studies in partnership with Thomas Jefferson University researchers at the American Diabetes Association’s 77th Scientific Sessions last week. The series of studies, led by Dr. Jeffrey Joseph and taking place at TJU’s Sidney Kimmel Medical College, revolve around determining the limitations of established insulin delivery systems and an answer to the question, “why do the catheters used with insulin infusion pumps often fail to function effectively after just a few days?”

Dr. Joseph presented and fielded questions pertaining to a newly unveiled poster on Sunday, titled “Micro-CT Imaging of an Insulin Bolus through Continuous Subcutaneous Insulin Infusion (CSII) Catheters in Swine: A Time Course Study of Distribution Patterns Over Seven Days.” The poster illustrated data from a recently completed animal study Dr. Joseph and his team at TJU conducted as part of the joint effort with Capillary to determine the mysterious nature of insulin pump failings over time.

A key finding shared at the ADA poster session was that inflamed tissue surrounding the catheter entry can often become an obstacle blocking effective absorption of insulin. Dr. Joseph also explained that catheter kinking plays a significant role in insulin set ineffectiveness and limited longevity. Further, he described how catheters made with softer, more pliable material appear to cause less tissue damage and may add to the longevity of an infusion set’s effectiveness.

These findings may signal a significant step in the direction of potential improvements to existing infusion pump technology, which is Capillary’s goal. More than 500,000 people with diabetes in the U.S. on CSII pump therapy are required to change their insulin infusion catheter every two to three days. Many patients attempt to use their infusion catheters for longer durations, often resulting in poorer blood glucose control and hyperglycemia due to infusion set failure. The cause of these infusion site failures has up to now not been well understood, but Capillary and Dr. Joseph intend to change that.

Capillary Biomedical has licensed underlying technology from Thomas Jefferson University and, working with the school, is developing novel CSII catheters that improve the predictability of insulin dosing and enable patients to reliably use one CSII catheter for seven or more days. More consistent and reliable insulin absorption will enable people with diabetes to achieve improved blood glucose control.

“Dr. Joseph’s research and innovative clinical methods are helping us to finally solve the mystery of why infusion sets fail over time,” said Paul Strasma, Capillary’s President and CEO. “As we uncover the problems and understand what the limitations truly are, we can offer solutions and improvements that impact daily life for people with diabetes. Every catheter failure we eliminate will help simplify diabetes management. And that reduces the burden on both patients and our overall healthcare system.”

Dr. Joseph and the Capillary Biomedical team are developing a non-kinking, less inflammatory CSII catheter they hope will improve the predictability of insulin pump therapy and that will cut in half the number of required needlesticks and site changes.

Learn more about Capillary Biomedical by visiting www.capillarybio.com.

To obtain illustrations, more information, or to conduct interviews with Capillary principals or Dr. Jeffrey Joseph, contact Paul Williams at paul@medialinecommunications.com or 310/569-0023.