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‘Top Chef’ star visits UM’s Diabetes Research Institute

VESTED INTEREST: Top Chef contestant Sam Talbot, left, talks to Chris Fraker at UM's Diabetes Research Institute. Talbot has Type 1 diabetes. | Peter Andrew Bosch Miami Herald

Staff

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Sam Talbot, a semi-finalist and “fan favorite” from season 2 of Bravo’s *Top Chef*, toured the University of Miami’s Diabetes Research Institute and had more than a passing interest in the research going on there.

Talbot knows firsthand what it’s like to have Type 1 diabetes; he was diagnosed when he was 12. Type 1 diabetes is rare — only about 5 percent of the approximately 30 million Americans with diabetes have Type 1, and many are diagnosed when they are children or young adults.

In Type 1, the body’s immune system destroys the insulin-producing cluster of cells in the pancreas known as islets. Each islet contains different types of cells, including the beta cell, which releases insulin to maintain blood sugar levels. In Type 1, the immune system views beta

cells as enemies and destroys them, thus preventing them from producing insulin, which the body needs to feed the cells.

People who have Type 1 diabetes, like Talbot does, manage it through insulin injections, carbohydrate counting and exercise.

During his visit to the lab, Talbot learned how Chris Fraker, Ph.D., designed devices to shield islets from an immune-system attack. The work centers on incorporating an oxygen-binding compound into the device to protect the cell.

Talbot told Fraker that he understands the concept because he uses a similar method called spherification when cooking. In spherification, chefs mix sodium or calcium solutions to shape a liquid into food resembling gel-like spheres, or roe-like.

“That’s what they’re doing in there,” he said. “They are basically using spherification to protect the cells once they’re inside the body.”

Another project the Diabetes Research Institute is working on is developing a bio-engineered mini organ that can house islets and sense blood sugar to release the right amount of insulin in real time. The device, known as the BioHub, mimics the actions of a functioning pancreas. It’s designed to work with Type 1 patients.

It’s not an easy task. The researchers have to find a supply of insulin-producing cells, have to figure out how the body will accept the cells, and develop a platform to place the new cells.

Talbot said visiting the institute was an “eye-opening experience” for him.

“It’s magic,” he said. “It could almost bring a tear to my eye to think that these guys are dedicating their lives to make sure that people like me and people all over the world are taken care of.”

As a chef, Talbot said he doesn’t make diabetic-friendly food, rather he makes “great tasting, healthy food that makes sense” whether someone is a diabetic or not.

“We have access to such beautiful food and clean products and we are not celebrating them enough,” he said. “Instead we are celebrating boxed goods with yellow No. 5 [dye]. My whole thing is getting back to the grassroots and celebrating an apple.”

Talbot does this in his cookbook, *The Sweet Life Diabetes Without Boundaries*, published in 2011.

And he’s developing a website called “Beyond Type 1,” a nonprofit that he has co-founded “to promote guidance for Type 1 diabetics at any stage.”

Gary Kleiman, the senior director of medical development at the research institute, said he was honored to have the “rising star” tour the facilities.

“He is doing some really great things and we are really thrilled that he cares enough about what we’re doing to come visit,” Kleiman said.