

[Life Sciences](#), [innovation](#), [research](#)

## The Auto Magnate and the Scientist: How Mass General is Working With Lee Iacocca to Find a Diabetes Cure



[Arlene Weintraub 6/24/11](#)

What happens when a guy who got wealthy selling cars hands millions of dollars to a scientist and tells her how to spend it? Folks attending the American Diabetes Association [conference](#) starting today in San Diego are getting a hint of the answer to that question. Denise Faustman, director of the Massachusetts General Hospital (MGH) immunobiology laboratory is presenting two abstracts from a clinical trial funded by the Boston-based [Iacocca Family Foundation](#), established by former Chrysler CEO Lee Iacocca to support research aimed at curing type 1 diabetes.

Faustman's data shows that low doses of an 80-year-old vaccine temporarily reversed type 1 diabetes in Phase 1 human trial. The vaccine is called bacillus Calmette-Guerin (BCG). It was developed to prevent tuberculosis and is now available as a generic drug. BCG induces the immune system to make tumor-necrosis factor (TNF), which kills the T-cells that cause the pancreas to stop producing insulin.

Faustman's [team](#) went to Iacocca's foundation for funding after repeatedly having the door slammed in their faces by drug companies. The MGH scientists had plenty of animal studies showing that it was possible to regenerate the pancreas, and therefore restore insulin production in diabetes models. But when MGH went to the pharmaceutical industry looking for funding to research a pancreas-regenerating drug, "everyone said, 'you're reversing the disease. How are we going to make money?'" Faustman says.

So MGH spent years looking for a generic drug that would stimulate the production of TNF. Iacocca's foundation supported much of that work, which involved drawing blood from thousands of diabetes patients and proving that they could use TNF to kill the bad T-cells. "One day, Mr. Iacocca looked at me and said, 'Denise, when are you going to cure diabetes?'" Faustman recalls.

Iacocca instructed Faustman to show the technique worked in a mouse study, so it could eventually be tried in humans. "No one had ever reversed diabetes in a mouse," she says. "Philanthropy can take risks. He made it clear it was his money and he wanted risky therapies done." Then the foundation put \$10 million toward the Phase 1 human trial. All told, Iacocca's group is the largest single donor to Faustman's research.

MGH's Phase 1 study was designed to answer four key questions about BCG, Faustman says. "Does it kill the bad T-cells? Does it induce the good T-cells? Does it change the pancreas? Does it restore insulin secretion?" The data, she says, "shows positive responses in all four outcomes."

One caveat, Faustman says, is that the drug produces a transient effect. That means it will have to be given in repeated intervals, perhaps every four to six weeks. Still, says Faustman, “this will be the first data showing that the pancreas can be turned back on.”

Iacocca launched his foundation in 1984 in honor of his late wife, Mary, who died of complications from type 1 diabetes. The foundation declined to comment for this story. But Kathryn Iacocca Hentz—president of the foundation and Lee’s daughter—said in a statement “These results are very meaningful to the Iacocca Family. We have supported this work since the mouse studies first showed the reversal of longstanding diabetes.”

The foundation has made a gift of undisclosed size to MGH to support the Phase 2 program, which MGH is now planning. The hospital has raised \$8.5 million of the \$25 million it will need to support the trial over the next three years. Though Faustman says they’ll need other partners to kick in additional funding, she’s certain they couldn’t have come this far without the help of the former Chrysler CEO. “You have to wonder how a guy who built cars knew what we needed to do,” she says. “But he knew what risks to take.”