Repurposing a Generic Tuberculosis Vaccine to Treat Type 1 Diabetes

In 2008, Cures Within Reach funded Dr. Denise Faustman at Massachusetts General Hospital / Harvard to support repurposing the generic vaccine BCG to help patients with Type 1 Diabetes (T1D). CWR first funded a screening trial, then a Phase I clinical trial. In 2018, Faustman published long-term results from this Phase I clinical trial, showing that multi-dosing BCG in long-term T1D patients can result in stable and long-term correction of blood sugars with just two doses of BCG, without further intervention. Patients with longstanding T1D before the Phase I trial had lowered blood sugar levels nearing the normal range for 5 consecutive years, without changing their care routine (no new pumps or diabetes monitoring devices). CWR funds are now supporting the Phase II clinical trial with 150 longstanding T1D patients.

Key Facts and Impact

- CWR provided $110,000 to fund the animal trial and Phase I / II human clinical trials repurposing the BCG vaccine for Type 1 Diabetes patients, along with funds from Iacocca Foundation.
- Phase I study resulted in long-term restoration of blood sugars in Type 1 diabetic patients.
- Early CWR funding helped to leverage >$20 million in follow-on funding from the Iacocca Foundation needed for this FDA registration trial.
- Faustman has expanded this BCG research to other diseases, including COVID-19.