

## Funded Research Improves Lives



### **BARIATRIC SURGERY REVERSES TYPE 2 DIABETES**

**TRACEY LYNN MCLAUGHLIN, MD  
2019-2022**

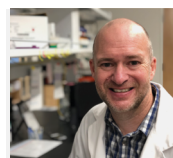
Dr. McLaughlin worked to understand exactly how gastric bypass surgery can reverse diabetes, especially because this surgery is not appropriate for every patient with type 2 diabetes. The research focused on exactly how gastric bypass surgery reverses diabetes, opening the door to the possibility of mimicking the procedure with less invasive treatments or new medications. Ultimately, this could result in the opportunity to improve or even reverse type 2 diabetes in many more patients.



### **STOPPING DIABETES FROM EVEN HAPPENING**

**JEFFREY ELMENDORF PhD  
2015-2017**

Dr. Elmendorf found that cholesterol accumulates in fat and muscle cells very early in the development of type 2 diabetes and this may be caused by overeating. The increased cholesterol in the membranes of these cells may contribute to the development of insulin resistance which is a hallmark of the disease. Importantly, he found that lifestyle changes, such as diet and exercise, known to prevent the progression to type 2 diabetes could prevent the toxic accumulation of cholesterol in these tissues.



### **PREVENTING OBESITY AND DIABETES**

**GREG MORTON PhD  
2019-2021**

When we are in cold environments, we need to burn more energy to stay warm. This means our heat-generating tissues deplete glucose at a much faster rate and our bodies adapt to meet this increased demand while maintaining normal glucose levels and preventing hypoglycemia. Dr. Morton's work has shown that our brain plays an important role in these metabolic adaptations and a better understanding of the neurocircuitry may lead to novel strategies for treating obesity and type 2 diabetes.



*We Fight Diabetes*

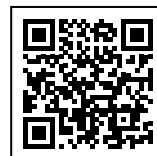
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## About us

**The Order of the Amaranth** is an international Masonic-related organization that endeavors to develop the moral character of its members through a belief in a Supreme Being and teaching the lessons of Truth, Faith, Wisdom and Charity.

**The Amaranth Diabetes Foundation, Inc. (ADF)** is a 501c3 organization that serves as the charitable arm of the Order. Since its inception in 1979, ADF donates all monies it raises in the United States to the ADA, where 100% of the funds support promising diabetes research. Our International Order also funds research in their respective areas to help stop the spread of diabetes.

**The ADF recognizes that diabetes is a devastating** disease that affects nearly 40 million Americans and countless others around the world. Statistics show that 1.2 million Americans are diagnosed with diabetes every year. It is for this reason that the ADF has been a strong supporter of the ADA and its research.

**We can make a difference** by making a tax-deductible donation to the ADF. In addition to cash gifts, the ADF accepts memorial donations, honorariums, stock, and estate designations. Together, we can help people live longer, healthier lives.

**Truth, Faith, Wisdom,  
and Charity for  
a cure.**

## 2026-2027 Amaranth Diabetes Foundation, Inc. Supported Research Awards and Grants

The Amaranth Diabetes Foundation, Inc. is an integral part of the global effort to stop the spread of diabetes. The Foundation Board selects the ADA-sponsored research projects that are conducted by the following scientists:



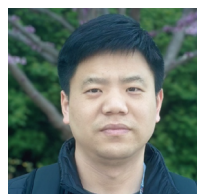
**ILIA DROUJININE, PhD** ▶  
The Scripps Research Institute

**Decoding and validating interorgan communication proteins as new therapeutic targets in diabetes**

Organs produce secreted proteins that travel to other organs as a means of communication, and this communication becomes faulty in diabetes. This project will

use this technology to identify and characterize novel secreted proteins involved in organ-to-organ communication in diabetes. Most importantly, is to advance our research to the translational, preclinical stage, because the identified secreted proteins may become new diagnostic biomarkers and therapeutics to treat the underlying causes of prediabetes and diabetes. This will further characterize these proteins, both helping to validate the technology as a platform that can enable more future discoveries, as well as evaluating their potential to serve as therapy for diabetic prevention or treatment in the future.

*(Grant funded through December 31, 2029)*



**YONG CHEN, MD, PhD** ▶  
Beth Israel Deaconess Medical Center

**Non-Thermogenic Functions of Brown Fat in Metabolic Regulation: Insights into Liver-Adipose Crosstalk**

For individuals with diabetes, maintaining healthy blood sugar levels often becomes more challenging when the liver

experiences oxidative stress or develops insulin resistance. This research aims to uncover how metabolites released by brown fat naturally protect the liver and enhance its insulin responsiveness. Understanding how brown fat-derived glutathione improves liver health may enable us to develop therapies that amplify this protective effect. This could open new pathways leveraging the body's inherent physiological mechanisms to enhance glucose homeostasis, reduce complication risks, and promote metabolic health.

*(Grant funded through June 30, 2027)*



**AMRITHA TRIKKUR MADOM SEETHARAMAN, PhD** ▶  
University of Tennessee

**Novel montelukast derivatives for treating diabetes-related retinopathy**

Diabetes is a complex condition that can cause fluctuating blood glucose (blood sugar) levels, and over time, it

can lead to diabetes-related retinopathy (DR), a serious eye complication that can lead to blindness if left untreated. Both neuronal and vascular components in the retina are damaged, causing significant cell death, leaky blood vessels, and inflammation. Our research aims to develop a novel treatment by combining targeted cellular mechanisms with localized intravitreal delivery, enabling early intervention to halt disease progression. If successful, this project will contribute to developing a novel therapeutic for DR, employing a dual approach by targeting cellular mechanisms and utilizing localized intravitreal administration to intervene early in the disease progression.

*(Grant funded through December 31, 2027)*



**GIORGIA ZANETTI, PhD** ▶  
Columbia University

**Developing a novel T1D mouse model to understand the interactions between human autoimmune systems and human  $\beta$  cells**

Type 1 diabetes (T1D) is caused by immune destruction of insulin-producing beta-cells. This research will help predict how different patients might respond to the drug and identify markers for success or resistance, paving the way for personalized T1D treatments. A humanized mouse model will be generated with human immune systems. These mice will develop diabetes by T cell recognition of antigens presented by human beta-cells. This research could lead to treatments that might help protect these cells in people with T1D, reducing their need for insulin injections and potentially slowing down or even preventing the disease.

*(Grant funded through December 31, 2027)*



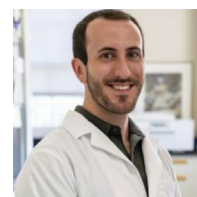
**LISA R. BEUTLER, MD, PhD** ▶  
Northwestern University Medical School

**Dissecting sugar-induced modulation of gut-brain circuits**

Despite its clear link to metabolic disease, very little is known about how a high-sugar diet alters the dynamics of this communication. This project will monitor the

activity of several neural populations critical for normal feeding and glucose balance in mice before and after a high-sugar diet. These experiments will enhance understanding of how nutrition impacts brain function, determine how this goes awry during the development of obesity and diabetes, and identify neural targets for preventing and treating these diseases.

*(Grant funded through December 30, 2027)*



**NICHOLAS WHITTICAR** ▶  
Duke University

**The role of branched-chain hydroxy acids in interorgan metabolic homeostasis**

People with type 2 diabetes often have problems with how their bodies process certain nutrients, including amino acids,

the building blocks of protein. The goal of this research is to understand how hydroxy acids molecules are created and broken down in the body and how this process differs between males and females or in people with obesity. Uncovering how this system works could lead to new ways to prevent or treat type 2 diabetes and related liver diseases.

*(Grant funded through December 31, 2028)*