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## **CureDM: A Novel Approach to Diabetes**

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CureDM is crossing disciplines to bring a novel approach to the treatment of diabetes. Applying new proteomics methods to physiology of diabetes to integrate clinical medicine with the frontiers of life science research has created this bold new approach.

It was a similar combination of clinical medicine and biology that yielded the discovery of insulin in 1922, when Fredrick Banting, a clinician, joined forces with a young biologist named Charles Best. This discovery transformed the disease of diabetes from a fatal condition to a chronic disease with which one could live.

Many new scientific discoveries have been made in the past decade, both in terms of pancreatic function and its relation to the brain and gut, and in terms of our knowledge of the immune attack on the pancreas at the cellular and proteomic level. Not unlike the parable of the blind men describing an elephant – many research teams have different descriptions of the cause and cure for diabetes depending on where they are standing. CureDM CEO Loraine Upham believes that it is the ultimate integration of these scientific endeavors that will produce a truly innovative new treatment.

Dr. Claresa Levetan and Dr. Rita El-hajj, endocrinologists at Main Line Endocrinology in Lankenau Hospital, forge ahead using their clinical skills and the tools available to treat patients with diabetes. However, they believe that advances in proteomics and cell biology hold promise that diabetes can be reversed by islet neogenesis, a process by which new insulin producing islets can be established to repopulate the pancreas. Recent research indicates that the precursor cells that are stimulated to form new insulin-producing cells exist, even in patients with longstanding diabetes, creating potential for this type of treatment in both type 1 and 2 diabetes.

CureDM scientists have discovered a bioactive peptide candidate called “Human proIslet Peptide (HIP)” that seems to have the ability to stimulate islet neogenesis from progenitor cells that exist throughout the pancreas. Scientists once thought that the number of insulin-producing islets a person was born with is all they would ever have. “We now know that islets turnover, at a naturally slow rate, that may be increased by treatment with an islet neogenesis agent, such as CureDM’s HIP Peptide,” Upham said.

In addition to developing the innovative human peptide, CureDM also is applying clinical principles to define the most appropriate conditions and dosing strategies to promote the process of islet neogenesis to reverse the disease state. Without the clinical understanding to make the subtle process of islet neogenesis turn on in a patient with long standing diabetes, efficacy may be difficult to achieve at best. Having two endocrinologists as founders is a crucial aspect of CureDM’s novel scientific and clinical approach.



It remains to be seen if the peptide meets safety standards required to be administered to humans, and if the dosing regimen can be implemented effectively to show efficacy in human subjects. Toward that next milestone, CureDM is charging through preclinical testing with Calvert Laboratories, a renowned contract research laboratory in Scranton, Pa., whose expert team is utilized to show whether HIP can meet the strict FDA standards in the U.S. to achieve approval for trials in humans.

CureDM biologists and clinicians have teamed up in a way that brings breadth of understanding to bear with laser-like focus on the problem of diabetes, toward a new therapeutic alternative to insulin injections. It is this type of innovation that is required to change diabetes again, from a chronic condition to a transient metabolic disorder.

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