ImmunoMolecular Therapeutics Launches to Advance Innovative Immunotherapies for Genetically Defined Type 1 Diabetes and Other Autoimmune Diseases

- Founded by world class researchers from the Barbara Davis Center for Diabetes at the University of Colorado, Denver -

BROOMFIELD, Colo. – November 9, 2017 – ImmunoMolecular Therapeutics (IM Therapeutics), a company developing personalized small molecule therapies for the treatment of genetically defined autoimmune diseases, today made its debut as a spinout from the Barbara Davis Center for Diabetes at the University of Colorado. IM Therapeutics was co-founded by Peter Gottlieb, M.D., Professor of Pediatrics and Medicine with tenure at the University of Colorado Health Science Center, and Director of Translational Research Unit at the Barbara Davis Center for Diabetes; and Aaron Michels, M.D., Associate Professor of Pediatrics & Medicine at the University of Colorado Denver, the Frieda and George S. Eisenbarth Clinical Immunology Endowed Chair, and Director of Clinical Immunology at the Barbara Davis Center for Diabetes.

IM Therapeutics was created to advance new therapeutic strategies for Type 1 Diabetes (T1D) that aim to directly inactivate pathogenic immune cells responsible for damaging the insulin-producing beta cells in the pancreas. The key to this approach is the group of immune molecules called human leukocyte antigens (HLA). Because HLA molecules arise from genes that are slightly different among individuals (i.e., alleles), some HLA alleles function in an abnormal way to “mis-present” autoantigens that leads the body to mount an immune system attack against itself. The HLA-DQ8 allele is one such gene known to predispose individuals that carry it for T1D by mis-presenting autoantigens that favor the generation and function of harmful, but not protective, immune cells.

“The strategy of directly inhibiting HLA-DQ8 has the potential to preserve beta-cell function if treatment is started early,” says Dr. Michels. “With current advancements in diagnostics, we can identify individuals with the HLA-DQ8 gene at risk of T1D before symptoms occur.”

Dr. Gottlieb continued, “Our ultimate goal is to inhibit the initiation of an autoimmune response, thus maintaining normal insulin production. I am excited to be part of a company that could potentially reduce T1D patients’ lifelong dependence on insulin.”

IM Therapeutics’ scientific co-founders discovered that an oral small molecule drug, methyldopa, targets and inhibits the HLA-DQ8 molecule. The company’s lead candidate, IMT-002, is a proprietary formulation of the D enantiomer of methyldopa. The D enantiomer offers more convenient dosing, better potency and less side effects than the L enantiomer which is an anti-hypertensive. The company has received orphan designation for methyldopa, which applies to both enantiomers. IMT-002 is currently in preclinical development as a candidate to treat T1D in patients with the HLA-DQ8 gene. Drs. Gottlieb and Michels will continue to advance the development of autoimmune therapies for IM Therapeutics as Chief Medical Officer and Chief Scientific Officer, respectively, while maintaining their clinical and academic appointments.

"Our unique personalized small molecule approach to immunotherapy utilized in IMT-002, is being developed to block the peptide binding groove of DQ8 on specific white blood cells," said Steve Orndorff, Ph.D., President and Chief Executive Officer, IM Therapeutics. "If successful, the pathogenic immune cells would not be able to identify the pancreatic beta-cells and the immune system can't attack what it can't see. While our initial focus is on T1D, our intent is to pursue this approach with other genetically defined autoimmune diseases, such as celiac disease."

The company will be led by Dr. Orndorff as President and Chief Executive Officer and Greg Kading, CFA as Chief Financial Officer and Chief Operating Officer. Dr. Orndorff and Mr. Kading previously worked together at Accera, where they were instrumental in guiding the company from R&D to commercialization.

IM Therapeutics also announced the appointment of a Clinical Advisory Board. Clinical Advisors include renowned researchers in diabetes and immunotherapy, Mark Atkinson, Ph.D., Jay Skyler, M.D., MACP, Stephen Gitelman, M.D., Howard L. Weiner, M.D. and V. Michael Holers, M.D.

About Type 1 Diabetes
Type 1 diabetes (T1D) is a polygenetic disorder that affects the insulin producing beta-cells in the pancreas, categorized by a lack of sufficient insulin production, which prevents tissues from utilizing glucose, leading to high blood sugar. Insulin production is slowed when T and B cells react to self-antigens in the islets of the pancreas where the body's insulin-producing beta-cells reside. The human HLA-DQ8 gene is the most significant factor in predisposing an individual to acquire T1D. The DQ8 gene is present in 50-60% of T1D patients and its protein product (a major histocompatibility class II molecule) is known to abnormally bind and present particular autoantigen peptides to autoreactive T cells.

About IMT-002
IMT-002 (D-methyldopa) is an oral small molecule drug being developed to treat T1D in patients with the HLA-DQ8 gene. IMT-002 occupies the peptide binding groove of DQ8 present on the surface of antigen presenting cells where diabetogenic peptides such as insulin are presented to CD4 T-lymphocytes to initiate the autoimmune cascade. When HLA-DQ8 function is inhibited, the immune system will no longer attack insulin producing beta-cells, thus creating the potential for at risk or early stage patients to maintain normal insulin production.

About IM Therapeutics
IM Therapeutics is developing personalized immuno-therapeutic drugs for autoimmune diseases based on the genetic risk attributed by human leukocyte antigen genes. The lead candidate drug is an oral small molecule that starves the autoimmune process in type 1 diabetes by blocking DQ8 on specific immune cells. Our goal is to preserve pancreatic beta cell function and maintain normal insulin production in at-risk and early-stage patients with type 1 diabetes.
http://imtherapeutics.com/

Media Contact
MacDougall Biomedical Communications

Amanda Houlihan or Kari Watson
781-235-3060
ahoulihan@macbiocom.com
kwatson@macbiocom.com