# vTv Therapeutics Announces Positive Results from Part 2 of the Phase 2 Simplici-T1 Study of TTP399, Potential First-in-Class Oral Adjunctive Therapy for Patients with Type 1 Diabetes

02/10/20

*- TTP399, a novel glucokinase activator, achieves primary objective of a statistically significant reduction in HbA1c, without increases in hypoglycemia or ketoacidosis*

*- Company to host investor conference call today at 8:30 a.m. ET*

HIGH POINT, N.C., Feb. 10, 2020 (GLOBE NEWSWIRE) -- vTv Therapeutics Inc. (Nasdaq: VTVT) today announced positive results from Part 2 of the Phase 2 Simplici-T1 trial assessing TTP399 as an oral adjunctive therapy to insulin in adults with type 1 diabetes (T1D). TTP399 is a novel, liver-selective glucokinase activator taken once a day. The 12-week trial investigated the efficacy and safety of 800 mg of TTP399 compared with placebo in 85 people with type 1 diabetes on optimized insulin therapy. The study was conducted with support from JDRF International (JDRF), the leading provider of T1D research funding globally.

The trial successfully achieved its primary objective analyzed using two statistical approaches to evaluating the effect of TTP399. The primary statistical analysis evaluated the effect on HbA1c regardless of treatment adherence or notable changes in insulin administration. Under the primary statistical analysis, the trial achieved its primary objective by demonstrating statistically significant improvements in HbA1c (long-term blood sugar) for TTP399 compared to placebo at week 12 (p=0.03).

TTP399 was well tolerated with similar incidences of treatment-emergent adverse events overall and by system organ class in both treatment groups. The study had no report of diabetic ketoacidosis in either treatment group. There was no incidence of severe hypoglycemia in the treated group and one incident in the placebo group. Patients taking TTP399 experienced fewer symptomatic hypoglycemic episodes: two subjects taking TTP399 reported at least one event compared to eight subjects taking placebo.

“I am very pleased that part 2 of the study confirmed the positive results and effects we saw in part 1. A once-a-day pill that reduces HbA1c and improves time in range with continuous glucose monitoring, without increasing hypoglycemia or any signal for adverse events, is a big win for the future care of type 1 diabetes,” said Dr. John Buse, Director of the North Carolina Translational and Clinical Sciences Institute and of the Diabetes Center at the University of North Carolina School of Medicine and principal investigator for this study.

To eliminate the possibility that the reduction in HbA1c was driven by the administration of excess insulin (3 or more units per day), a second estimand analysis was performed.[1] Based upon this analysis, people treated with TTP399 achieved a statistically-significant placebo-subtracted reduction in HbA1c of 0.32% (p=0.001). Patients taking TTP399 experienced a 0.21% reduction in HbA1c, while patients taking placebo experienced a 0.11% increase in HbA1c, from a mean study baseline HbA1c of 7.6% following a multi-week insulin optimization period prior to the administration of study treatment.

Daily Time in Range was improved by approximately two hours in patients treated with TTP399 relative to placebo (p=0.03). TTP399 treatment reduced the total daily mealtime bolus insulin dose by 11% relative to baseline (p=0.02) whereas the placebo-treated group experienced a 3% decrease relative to baseline.

“The development of a safe and effective therapy that improves glucose control is a critical step toward eliminating the dangerous highs and lows associated with type 1 diabetes,” said Sanjoy Dutta, Ph.D., JDRF Vice President of Research. “The results from the Simplici-T1 trial indicate that TTP339 is a promising oral treatment option to help people with type 1 diabetes keep their HbA1c levels within a healthy range, and stay in a desirable glucose range for most of the day, while simplifying the daily management of the disease.”

Despite advances in insulin and its administration, people with T1D continue to have difficulty achieving optimal glucose control (HbA1c of less than 7.0%), warranting the need for adjunctive therapies. TTP399 selectively activates glucokinase (GK), a key regulator of glucose metabolism, in the liver. This activation has been shown to increase glucose utilization, which in turn lowers blood glucose. Simplici-T1 is the first study to test activation of GK in patients with T1D, evaluating daily oral TTP399 as an adjunct to insulin therapy.

“Roughly 1.5 million people in the US are living with type 1 diabetes and the burdensome, around the clock disease management it requires to avoid life-threatening complications. These patients and their families are demanding new treatment options that offer simple, predictable diabetes management to improve HbA1c and time in range. Consistent with FDA guidance, a 0.3% improvement in HbA1c is considered clinically meaningful, and coupled with the well-controlled population of patients and favorable safety data from our clinical trials to date, this provides a strong basis for moving this potential first-in-class program forward,” said Steve Holcombe, President and CEO of vTv Therapeutics. “We intend to engage with the FDA as soon as possible to plan an efficient development pathway for TTP399 and hope to initiate a registration trial this year.”

**About the Simplici-T1 Study**
Simplici-T1 is a multi-center, randomized, double-blind, adaptive study assessing the safety and efficacy of TTP399 as an adjunct to insulin therapy in adults with T1D. The primary endpoint was the change in HbA1c at week 12. The study was conducted with support from JDRF, the leading global organization funding research in type 1 diabetes.

This Phase 2 learn-and-confirm study was conducted in two parts under the same protocol to evaluate the safety and efficacy of TTP399 in T1D patients over 12 weeks of daily dosing following a multi-week insulin optimization and placebo run-in period. Part 1 enrolled 19 patients on both insulin pumps and CGMs. The positive topline results from Phase 2 - Part 1 were reported in June, 2019. Part 2 enrolled 85 patients that used either insulin pumps or multiple daily injections of insulin; CGMs were allowed for those patients using the devices for at least three months prior to the start of the study.

**Investor Call and Webcast Dial-In Information**

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| Domestic: | 877-423-9813 |
| International: | 201-689-8573 |
| Conference ID: | 13699047 |
| Webcast: | http://public.viavid.com/index.php?id=138082 |

**About Type 1 Diabetes**
Type 1 diabetes (T1D) is an autoimmune disease in which a person's pancreas stops producing insulin, a hormone that enables people to get energy from food. It occurs when the body's immune system attacks and destroys the insulin-producing cells in the pancreas, called beta cells. While its causes are not yet entirely understood, scientists believe that both genetic factors and environmental triggers are involved. Its onset has nothing to do with diet or lifestyle. There is nothing you can do to prevent T1D, and—at present—nothing you can do to cure it.

**About JDRF**
JDRF is the leading global organization funding T1D research. Its mission is to accelerate life-changing breakthroughs to cure, prevent and treat T1D and its complications. To accomplish this, JDRF has invested more than $2.2 billion in research funding since its inception. JDRF is an organization built on a grassroots model of people connecting in their local communities, collaborating regionally for efficiency and broader fundraising impact, and uniting on a national stage to pool resources, passion, and energy. It collaborates with academic institutions, policymakers, and corporate and industry partners to develop and deliver a pipeline of innovative therapies to people living with T1D. JDRF's staff and volunteers throughout the United States and its six international affiliates are dedicated to advocacy, community engagement and a vision of a world without T1D. For more information, please visit jdrf.org or on Twitter: @JDRF.

**About vTv Therapeutics**
vTv Therapeutics Inc. is a clinical-stage pharmaceutical company focused on treating metabolic diseases to minimize their long-term complications through end-organ protection. vTv has an innovative pipeline of first-in-class small molecule clinical and pre-clinical drug candidates for the treatment of a wide range of metabolic diseases and their long term complications such as type 1 diabetes and Alzheimer's disease. vTv's development partners are pursuing additional indications in type 2 diabetes, chronic obstructive pulmonary disease (COPD), and genetic mitochondrial diseases. For more information, please visit www.vtvtherapeutics.com or follow us on Twitter: @vTvTherapeutics.

**Forward-Looking Statements**
This release contains forward-looking statements, which involve risks and uncertainties. These forward-looking statements can be identified by the use of forward-looking terminology, including the terms "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "target," "will," "would" and, in each case, their negative or other various or comparable terminology. All statements other than statements of historical facts contained in this release, including statements regarding the timing of our clinical trials, our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Important factors that could cause our results to vary from expectations include those described under the heading "Risk Factors" in our Annual Report on Form 10-K and our other filings with the SEC. These forward-looking statements reflect our views with respect to future events as of the date of this release and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. These forward-looking statements represent our estimates and assumptions only as of the date of this release and, except as required by law, we undertake no obligation to update or review publicly any forward-looking statements, whether as a result of new information, future events or otherwise after the date of this release. We anticipate that subsequent events and developments will cause our views to change. Our forward-looking statements do not reflect the potential impact of any future acquisitions, merger, dispositions, joint ventures or investments we may undertake. We qualify all of our forward-looking statements by these cautionary statements.

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[1] The second estimand analysis evaluated the effect on HbA1c for patients without evidence of noncompliance with prescribed treatment who did not administer increases of bolus insulin of three or more units per day. This second estimand analysis was conducted consistent with current regulatory guidance.

Source: vTv Therapeutics Inc.