FOR IMMEDIATE RELEASE **NASDAQ: TRIL**
TSX: TRIL

TRILLIUM THERAPEUTICS PROVIDES UPDATE ON ITS TTI-621 AND TTI-622 CD47 PROGRAMS

- *Intravenous TTI-621 dose escalation under initial dose limiting toxicity (DLT) criteria now completed – confirms TTI-621 monotherapy activity (including complete responses) in hematologic malignancies at doses up to 0.5 mg/kg*
- *Further TTI-621 dose escalation under revised DLT criteria in progress, currently dosing at 1.0 mg/kg level; development in combination with other agents to follow*
- *TTI-622 dose finding study progressing with no DLTs observed to date; dosing at 2.0 mg/kg completed; dosing at 4.0 mg/kg started in December 2019*

CAMBRIDGE, MA, January 7, 2020 – Trillium Therapeutics Inc. ("Trillium" or the "Company") (NASDAQ/TSX: TRIL), a clinical stage immuno-oncology company developing innovative therapies for the treatment of cancer, today provided an update on its TTI-621 and TTI-622 clinical programs.

"We have now completed the initial dose finding and signal seeking parts of our phase 1 study of intravenous TTI-621 at doses up to 0.5 mg/kg," said Dr. Jan Skvarka, President and Chief Executive Officer of Trillium. "The program continues to demonstrate clear single agent activity across a range of hematologic malignancies, as well as a strong tolerability profile. We believe that TTI-621, even at these low initial doses, is the only anti-CD47 agent that has shown meaningful single agent activity, including complete responses. Our immediate priority is to complete the ongoing monotherapy dose escalation under revised DLT criteria for thrombocytopenia. We are currently dosing at 1.0 mg/kg, or 5 times the dose level at which we observed initial single agent activity. Once we have defined the maximum tolerated dose (MTD), we intend to move TTI-621 into combinations with other agents in larger indications with high unmet need, namely acute myeloid leukemia (AML)/myelodysplastic syndromes (MDS), peripheral T-cell lymphoma (PTCL) and other oncology indications. We currently expect that we will identify the MTD and initiate one or more combination studies later this year."

"We are equally excited about the dose escalation progress with our IgG4-based agent, TTI-622," said Dr. Yaping Shou, Trillium's Chief Medical Officer. "We believe that the clean binding profile on red blood cells provides TTI-622 with the opportunity to potentially achieve best-in-class status among IgG4-based anti-CD47 molecules."

An updated corporate presentation has been posted on Trillium's website. The presentation provides additional detail on the clinical data reported here in context with the corporate strategy.

TTI-621 Program Update

A phase 1 multicenter, open-label study in which patients with advanced relapsed or refractory hematologic malignancies receive intravenous TTI-621 is currently in progress (NCT02663518). The study consists of four parts: (a) "Parts 1-3" in hematologic malignancies, with dosing up to 0.5 mg/kg, conducted under initial DLT criteria, now completed; and (b) "Part 4" in cutaneous T-cell lymphoma (CTCL), utilizing revised DLT criteria for thrombocytopenia (as detailed below) and an amended protocol to allow for dosing above 0.5 mg/kg, now ongoing.

Over 200 patients received doses ranging from 0.05 to 0.5 mg/kg, with the majority enrolled at 0.2-0.5 mg/kg dose levels. Updated safety data demonstrate that TTI-621 is generally well tolerated. The most frequent drug related adverse events were low-grade infusion reactions and transient thrombocytopenia that was not associated with bleeding.

TTI-621 activity has been observed in patients across a range of hematologic malignancies. Notably, most patients were at an advanced stage of their disease and heavily pretreated, with median number of prior systemic treatments between 3 and 4 (range 1-26). Highlights of the updated, now complete, data set for Parts 1-3 are shown below:

Highlights of TTI-621 Parts 1-3 data (at initial doses up to 0.5 mg/kg)

	CTCL	**PTCL**	**DLBCL***	
Therapy	621 mono	621 mono	621 mono	621+Rtx*
N (response evaluable)	42	22	7	25
% patients with ≥ stage III disease at diagnosis	57%	73%	86%	80%
# prior systemic treatments, median (min-max)	4 (1-26)	3 (1-6)	3 (2-8)	4 (2-10)
Objective response rate (n, %)	8 (19%)	4 (18%)	2 (29%)	6 (24%)
Complete responses (n, %)	1 (2%)	2 (9%)	1 (14%)	1 (4%)

*DLBCL – diffuse large B-cell lymphoma; Rtx – rituximab
Note: Objective response rate (ORR) includes partial response and complete response rates

Part 4 of the study is now ongoing under an amended protocol. Given the transient nature of thrombocytopenia observed in Parts 1-3 of the study, the DLT definition for thrombocytopenia was revised, from Grade 4 of any duration in Parts 1-3, to Grade 4 lasting 72+ hours or a platelet count less than 10,000/microliter at any time in Part 4. As previously reported, 0.5 and 0.7 mg/kg dose levels have not shown any DLTs; furthermore

no Grade 4 thrombocytopenia of any duration has been observed. The study is now dosing at the 1.0 mg/kg level, or five-fold the 0.2 mg/kg dose level where monotherapy effect was initially observed. The protocol stipulates 1.4 mg/kg as the next potential dosing level, and allows for higher dosing if appropriate.

While the dose escalation is conducted with TTI-621 monotherapy, further clinical development strategy will pursue primarily combinations with other agents.

The Company plans to provide a study update by mid-2020.

TTI-622 Program Update

A two-part, multicenter, open-label, phase 1a/1b study of TTI-622 in patients with advanced relapsed or refractory lymphoma or multiple myeloma is currently in progress (NCT03530683). In the phase 1a dose-escalation part, patients are being enrolled in sequential dose cohorts to receive TTI-622 once weekly to characterize safety, tolerability, pharmacokinetics, and to determine the maximum tolerated dose. In the phase 1b part, patients with hematologic malignancies will be treated with TTI-622 in combination with other agents.

The Company is reporting that it has completed dosing in the fourth dose escalation cohort, where patients received a top dose of 2.0 mg/kg. No DLTs or drug-related serious adverse events have been observed, and enrollment is now open in the fifth cohort, with a top dose of 4.0 mg/kg. Although TTI-622 is being developed primarily as a combination therapy, a partial response has been observed in a DLBCL patient receiving 0.8 mg/kg TTI-622 monotherapy.

The Company plans to provide a study update by mid-2020.

About TTI-621 and TTI-622 Programs

TTI-621 (SIRPa-IgG1 Fc) is a decoy receptor that blocks CD47 and delivers an activating signal to effector cells such as macrophages through its IgG1 Fc region. This activating signal, which increases the likelihood of monotherapy activity, together with a lack of unwanted binding to red blood cells, provides TTI-621 with the potential to be the best-in-class CD47 blocking agent.

TTI-622 (SIRPa-IgG4 Fc) is Trillium's second SIRPaFc decoy receptor in clinical development. It consists of the same CD47-binding domain of human SIRPa as TTI-621, however it is linked to an IgG4 Fc region. Like TTI-621, TTI-622 has the advantage of minimal binding to human red blood cells, thereby reducing the risk of anemia and a large antigen sink effect. Given these characteristics, the Company believes TTI-622 has the potential to be the best-in-class agent in the IgG4 segment of the CD47 category.

About Trillium Therapeutics

Trillium is an immuno-oncology company developing innovative therapies for the treatment of cancer. The Company's two clinical programs, TTI-621 and TTI-622, target CD47, a "do not eat" signal that cancer cells frequently use to evade the immune system.

The Company's pipeline also includes a preclinical STING (stimulator of interferon genes) agonist program. As previously announced, the program is earmarked for out-licensing.

For more information visit: www.trilliumtherapeutics.com

Caution Regarding Forward-Looking Information

This press release contains forward-looking statements within the meaning of applicable United States securities laws and forward-looking information within the meaning of Canadian securities laws (collectively, "forward-looking statements"). Forward-looking statements in this press release include statements about, without limitation, Trillium's clinical plans including expanding to additional indications, the belief that Trillium's programs could achieve best-in-class status for CD47 blocking agents, Trillium's expected timing of providing trial updates, and Trillium's future plans and objectives for our TTI-621 and TTI-622 programs. With respect to the forward-looking statements contained in this press release, Trillium has made numerous assumptions regarding, among other things: the effectiveness and timeliness of clinical trials; and the completeness, accuracy and usefulness of the data. While Trillium considers these assumptions to be reasonable, these assumptions are inherently subject to significant scientific, business, economic, competitive, market and social uncertainties and contingencies. Additionally, there are known and unknown risk factors that could cause Trillium's actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements contained in this press release. A discussion of risks and uncertainties facing Trillium appears in Trillium's Form 20-F for the year ended December 31, 2018 filed with the U.S. Securities Exchange Commission and available at www.sec.gov and www.sedar.com, each as updated by Trillium's continuous disclosure filings, which are available at www.sedar.com and at www.sec.gov. Forward-looking statements are not guarantees of future performance and accordingly undue reliance should not be put on such statements due to the inherent uncertainty therein. Any forward-looking statements speaks only as of the date on which it is made and, except as may be required by applicable securities laws, Trillium disclaims any intent or obligation, whether as a result of new information, future events or results or otherwise. All forward-looking statements herein are qualified in their entirety by this cautionary statement.

Investor Relations:
James Parsons
Chief Financial Officer
Trillium Therapeutics Inc.
416-595-0627 x232
james@trilliumtherapeutics.com
www.trilliumtherapeutics.com