Acasti Pharma Announces TRILOGY Phase 3 Trials of CaPre® in Patients with Severe Hypertriglyceridemia Has Now Exceeded 65% Randomization, and More Than 100 Patients (>20%) Have Completed Their 6 Month Treatment Plan

Laval, Québec, CANADA, December 31, 2018 — Acasti Pharma Inc. ("Acasti or the "Company") (NASDAQ: ACST – TSX-V: ACST), a biopharmaceutical innovator focused on the research, development and commercialization of its prescription drug candidate CaPre® (omega-3 phospholipid) for the treatment of severe hypertriglyceridemia (HTG), today announced that the two Phase 3 TRILOGY trials have now exceeded 65% patient randomization, and more than 100 patients have completed their 6 month treatment plan. In total, about 1,500 patients have been enrolled at 150 clinical sites across the U.S., Canada and Mexico.

Jan D'Alvise, president and CEO of Acasti Pharma, commented, "We are pleased to announce that more than 20% of patients in the TRILOGY program have already completed their 6 month treatment plans. We now have more than 65% of the required total randomized patients for the two studies. The Company had achieved the enrollment targets for TRILOGY earlier in December, however additional patients may continue to be enrolled through the first quarter of 2019 to attain final randomization targets as needed. This excellent progress further supports our confidence in completing these studies on schedule with topline results expected to be reported before the end of calendar 2019."

Additionally, Acasti Pharma today announced that on December 26, 2018, it received written notification from the Nasdaq Listing Qualifications Department ("**Nasdaq**") for failing to maintain a minimum bid price of U.S.$1.00 per share for the last 30 consecutive business days, as required by Nasdaq Listing Rule 5550(a)(2) – bid price (the "**Minimum Bid Price Rule**").

The Nasdaq notification has no immediate effect on the listing of Acasti Pharma's shares. Under Nasdaq Listing Rule 5810(c)(3)(A) – compliance period, Acasti Pharma has 180 calendar days, or until June 24, 2019, to regain compliance. If at any time over this period the bid price of Acasti Pharma's shares closes at U.S.$1.00 per share or more for a minimum of ten (10) consecutive business days, Nasdaq will provide written confirmation of compliance and the matter will be closed.

If Acasti Pharma does not regain compliance within the initial 180-day period, but otherwise meets the continued listing requirements for market value of publicly-held shares and all other initial listing standards for the Nasdaq Listing Rule 5505 – Capital Market criteria, except for the Minimum Bid Price Rule, Acasti Pharma may be eligible for an additional 180 calendar days to regain compliance. If Acasti Pharma is not granted additional time, then its shares will be subject to delisting, at which time Acasti Pharma may appeal the delisting determination to a Nasdaq Hearings Panel.

Acasti Pharma intends to evaluate all available options to resolve the deficiency and regain compliance with the Minimum Bid Price Rule.

About CaPre (omega-3 phospholipid)

Acasti Pharma's prescription drug candidate, CaPre, is a highly purified omega-3 phospholipid concentrate derived from krill oil and is being developed to treat severe hypertriglyceridemia, a metabolic condition that contributes to increased risk of cardiovascular disease and pancreatitis. Its omega-3s, principally EPA and DHA, are either "free" or bound to phospholipids that allows for better absorption into the body. Acasti Pharma believes that EPA and DHA are more efficiently transported by phospholipids sourced from krill oil than the EPA and DHA contained in fish oil that are transported either by triglycerides (as in dietary supplements) or as ethyl esters in other prescription omega-3 drugs, which must then undergo additional digestion before they are ready for transport in the bloodstream. Acasti Pharma's CaPre Phase 3 program is currently underway.

About Acasti Pharma

Acasti Pharma is a biopharmaceutical innovator advancing a potentially best-in-class cardiovascular drug, CaPre® (omega-3 phospholipid), for the treatment of hypertriglyceridemia, a chronic condition affecting an estimated one third of the U.S. population. Since its founding in 2008, Acasti Pharma has focused on addressing a critical market need for an effective, safe and well-absorbing omega-3 therapeutic that can make a positive impact on the major blood lipids associated with cardiovascular disease risk. Acasti Pharma is developing CaPre in a Phase 3 clinical program in patients with severe hypertriglyceridemia, a market that includes 3 to 4 million patients in the U.S. The addressable market may expand significantly if omega-3s demonstrate long-term cardiovascular benefits in on-going third-party outcomes studies. Acasti Pharma may need to conduct at least one additional clinical trial to support FDA approval of a supplemental New Drug Application to expand CaPre's indications to this segment. Acasti Pharma's strategy is to commercialize CaPre in the U.S. and Acasti Pharma is pursuing development and distribution partnerships to market CaPre in major countries around the world. For more information, visit www.acastipharma.com.

Forward Looking Statements

Statements in this press release that are not statements of historical or current fact constitute "forward-looking information" within the meaning of Canadian securities laws and "forward-looking statements" within the meaning of U.S. federal securities laws (collectively, "**forward-looking statements**"). Such forward-looking statements involve known and unknown risks, uncertainties, and other unknown factors that could cause the actual results of Acasti Pharma to be materially different from historical results or from any future results expressed or implied by such forward-looking statements. In addition to statements which explicitly describe such risks and uncertainties, readers are urged to consider statements labeled with the terms "believes," "belief," "expects," "intends," "anticipates," "potential," "should," "may," "will," "plans," "continue", "targeted" or other similar expressions to be uncertain and forward-looking. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this press release. Forward-looking statements in this press release include, but are not limited to, information or statements about Acasti Pharma's strategy, future operations, prospects and the plans of management; Acasti Pharma's ability to conduct all required clinical and non-clinical trials for CaPre, including the timing and results of those trials; the timing and the outcome of licensing negotiations; CaPre's potential to become the "best-in-

class" cardiovascular drug for treating severe hypertriglyceridemia, Acasti Pharma's ability to commercially launch CaPre, and, Acasti Pharma's ability to fund its continued operations.

The forward-looking statements contained in this press release are expressly qualified in their entirety by this cautionary statement, the "Cautionary Note Regarding Forward-Looking Information" section contained in Acasti Pharma's latest annual report on Form 20-F and most recent management's discussion and analysis (MD&A), which are available on SEDAR at www.sedar.com, on EDGAR at www.sec.gov/edgar/shtml, and on the investor section of Acasti Pharma's website at www.acastipharma.com. All forward-looking statements in this press release are made as of the date of this press release. Acasti Pharma does not undertake to update any such forward-looking statements whether as a result of new information, future events or otherwise, except as required by law. The forward-looking statements contained herein are also subject generally to assumptions and risks and uncertainties that are described from time to time in Acasti Pharma's public securities filings with the Securities and Exchange Commission and the Canadian securities commissions, including Acasti Pharma's latest annual report on Form 20-F and most recent MD&A.

Neither NASDAQ, the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

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