UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of December 2012.

Commission File Number: **000-54771**

Acasti Pharma Inc.
(Translation of registrant's name into English)

545 PROMENADE DU CENTROPOLIS, SUITE 100
LAVAL QUEBEC H7T 0A3
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.
Form 20-F [ ] Form 40-F [x]

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ___

Note: Regulation S-T Rule 101(b)(1) only permits the submission in paper of a Form 6-K if submitted solely to provide an attached annual report to security holders.

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ___

Note: Regulation S-T Rule 101(b)(7) only permits the submission in paper of a Form 6-K if submitted to furnish a report or other document that the registrant foreign private issuer must furnish and make public under the laws of the jurisdiction in which the registrant is incorporated, domiciled or legally organized (the registrant's "home country"), or under the rules of the home country exchange on which the registrant's securities are traded, as long as the report or other document is not a press release, is not required to be and has not been distributed to the registrant's security holders, and, if discussing a material event, has already been the subject of a Form 6-K submission or other Commission filing on EDGAR.

On December 17, 2012 the Registrant issued a press release, a copy of which is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

(c) Exhibit 99.1. Press release dated December 17, 2012

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Acasti Pharma Inc.
(Registrant)

Date: December 17, 2012

/s/ HENRI HARLAND
Henri Harland
CEO

Acasti Pharma Provides an Insight of Its Current Clinical Trials Results

LAVAL, Quebec, Dec. 17, 2012 (GLOBE NEWSWIRE) -- Acasti Pharma Inc. (" **Acasti**") (TSX-V:APO), a Neptune Technologies & Bioressources Inc. ("**Neptune**") subsidiary, announces a clinical study update and announces the first ever human data of safety and efficacy of its patented prescription drug candidate CaPre®.

Acasti has achieved significant progress in the two presently ongoing clinical studies. The registrational phase II double blind placebo controlled clinical study has completed its first of two interim analysis. The review committee assembled to evaluate the progress of the study reviewed the interim analysis relative to drug safety and efficacy, and agreed, unanimously, that the study should continue as planned. All committee members were convinced that there are no concerning toxicity issues and that the signals of possible CaPre® therapeutic effect, noted as reduction of triglyceride in the groups evaluated, were reassuring and clinically significant to allow the further continuation of the study. As it is customary, the data was provided to the committee members blind, meaning that the identity of the three groups was not revealed. Since the data showed no safety concerns and a strong clinical signal the decision was made, by the committee, that it is safe to continue the study and that there is no need to unblind the data.

The second phase II open label clinical study should be completed by the end of the first quarter of 2013. It has been delayed due to the need for further patient recruitment after the approved clinical trial amendment to add an additional 4g/day CaPre® treatment group, following a FDA recommendation to evaluate the effect of a 4g dose. Acasti was able to obtain completed clinical data from a cohort of patients that completed an eight-week treatment with 2g CaPre® per day, which will not be included in the primary analysis under the amended protocol. Test results of 23 patients were analysed of whom 19 had baseline triglyceride levels between 204 and 476mg/dl. The data showed a statistically significant 25% ($p<0.05$) reduction in triglycerides after eight weeks of treatment. Besides the important decrease in triglycerides, CaPre® also decreased Low Density Lipoprotein (LDL), Very Low Density Lipoprotein (VLDL) and non-HDL lipids and increased High Density Lipoprotein (HDL).

"We are pleased with the progress of our clinical efforts. Most notably, we are very satisfied with the significant impact on triglyceride even in this hard to treat population of patients in the lower strata of hypertriglyceridemia. Achieving statistical significance with such a low number of patients and only after a short eight-week treatment period definitely encourages us to push our strategy forward towards US clinical studies and validation during the upcoming year" said Harlan Waksal, M.D., Executive Vice-President, Business and Scientific affairs. "The Management's enthusiasm remains strong. We are moving forward to finalize plans for the filing of a US IND for Phase III clinical study in 2013" Dr. Waksal concluded.

"This snapshot of clinical data has given us a first look at the safety and clinical efficacy of this very interesting drug candidate. Even within a small cohort, CaPre® has demonstrated its ability to be a valuable alternative in the control of triglycerides. This early look at data is in line with our expectation of the safety and clinical promise of this patented novel omega-3 entity" stated Dr. Jean Davignon, chairman of the review committee and Emeritus Researcher, Clinical Research Institute of Montreal (IRCM). "The lipidologists community is markedly interested in lipid residual risk reduction in the post-statin era and is always looking for effective drugs" he added.

About Acasti Pharma Inc.

Acasti Pharma is developing a product portfolio of proprietary novel long-chain omega-3 phospholipids. Phospholipids are the major component of cell membranes and are essential for all vital cell processes. They are one of the principal constituents of High Density Lipoprotein (good cholesterol) and, as such, play an important role in modulating cholesterol efflux. Acasti Pharma's proprietary novel phospholipids carry and functionalize the polyunsaturated omega-3 fatty acids EPA and DHA, which have been shown to have substantial health benefits and which are stabilized by potent antioxidants. Acasti Pharma is focusing initially on treatments for chronic cardiovascular and cardiometabolic conditions within the over-the-counter, medical food and prescription drug markets.

"Neither Nasdaq nor 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."

Statements in this press release that are not statements of historical or current fact constitute "forward-looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 and Canadian securities laws. Such forward-looking statements involve known and unknown risks, uncertainties, and other unknown factors that could cause the actual results of the Company 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," "will," or "plans" to be uncertain and forward-looking. The forward-looking statements contained herein are also subject generally to other risks and uncertainties that are described from time to time in the Company's reports filed with the Securities and Exchange Commission and the Canadian securities commissions.

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