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: April 2018

Commission File Number: 001-35776

ACASTI PHARMA INC.

(Name of Registrant)

545 Promende du Centropolis Suite 100 Laval, Québec Canada 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 🗵

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):

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):

Indicate by check mark whether by furnishing the information contained in this Form, the registrant is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

> Yes 🗆 No 🗵

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): N/A

This Report on Form 6-K including the exhibits hereto shall be deemed to be incorporated by reference into Acasti Pharma Inc.'s registration statement on Form S-8 (File No. 333-191383) and to be a part thereof from the date on which this report is furnished, to the extent not superseded by documents or reports subsequently filed or furnished.

Form 40-F

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.

Date: April 23, 2018

By: /s/ Jan D'Alvise

Name: Jan D'Alvise Title: Chief Executive Officer

EXHIBIT INDEX

 Exhibit
 Description of Exhibit

 99.1
 Acasti Pharma Announces Overnight Marketed Canadian Public Unit Offering



Acasti Pharma Announces Overnight Marketed Canadian Public Unit Offering

Laval, Quebec — April 23, 2018 — Acasti Pharma Inc. (NASDAQ: ACST) (TSXV: ACST) (the "Company" or "Acasti") is pleased to announce that it has filed a preliminary short form prospectus in connection with an overnight marketed public offering (the "Offering") of units of the Company ("Units"), with each such Unit comprising one common share ("Common Shares") and one common share purchase warrant ("Warrants") of the Company exercisable at any time up to 5 years following the closing of the Offering. The Offering will be conducted by a Canadian underwriter, as sole bookrunner and lead underwriter (the "Lead Underwriter"), pursuant to which the Lead Underwriter may syndicate the Offering to a selling group or sub-underwriters (together with the Lead Underwriter, the "Underwriters"). The pricing and number of Units will be determined in the course of marketing.

The Company will also grant the Underwriters an over-allotment option to purchase at the offering price up to that number of additional Units equal to 15% of the Units sold pursuant to the Offering, exercisable at any time up to 30 days after the closing date of the Offering.

The Offering is being made pursuant to a short-form prospectus filed in each of the provinces of Québec, Ontario, Alberta, Manitoba and British Columbia. The Units may also be offered for sale in the United States pursuant to exemptions from the registration requirements of the U.S. Securities Act of 1933. The Units (including the Common Shares and Warrants) will not be registered under the U.S. Securities Act of 1933, as amended, or any state securities laws, and may not be offered or sold in the United States or to, or for the account or benefit of, U.S. persons absent registration or an exemption from the registration requirements. This press release shall not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of the Units in any jurisdiction in which such offer, solicitation or sale would be unlawful.

The net proceeds received by the Company from the Offering, together with cash on hand, are intended to be used by the Company for the further development of CaPre® (omega-3 phospholipid) and the continued advancement of the Company's Phase 3 program, including continued clinical site activation; progression of patient enrollment and randomization; production of clinical material (both CaPre and placebo) for the Phase 3 program; initial planning of Acasti's regulatory (NDA) submission; expansion of business development activities; working capital; and other general corporate purposes.

The Offering is scheduled to close on or about the week of May 7, 2018, and is subject to certain conditions including, but not limited to, the receipt of all necessary regulatory approvals including the approval of the TSX Venture Exchange ("TSXV") and the NASDAQ Stock Market ("NASDAQ"). Until such time as an underwriting agreement is entered into, the Underwriters are under no obligation to underwrite, sell or purchase any securities of the Company or to enter into any such transaction.

About Acasti

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. CaPre is being evaluated in a Phase 3 clinical program in patients with severe hypertriglyceridemia, a market that includes 3 to 4 million patients in the U.S. and may expand significantly if omega-3s demonstrate long-term cardiovascular benefits in on-going outcomes studies. Acasti's strategy is to commercialize CaPre in the U.S. and the company is pursuing 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 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. 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, statements pertaining to the proposed completion of the Offering, the entering into of an underwriting agreement and the anticipated use of proceeds.

The forward-looking statements contained in this news release are expressly qualified in their entirety by this cautionary statement and the "Special Note Regarding Forward-Looking Statements" section contained in Acasti's latest annual report on Form 20-F, which is available on SEDAR at www.sedar.com, on EDGAR at www.sec.gov/edgar and on the investor section of Acasti's website at www.acastipharma.com (the "Annual Report"). All forward-looking statements in this press release are made as of the date of this press release. Acasti 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 other risks and uncertainties that are described from time to time in Acasti's public securities filings with the Securities and Exchange Commission and the Canadian securities regulators, including the Annual Report and Acasti's latest management's discussion and analysis.

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

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