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October 12, 2018

New York

Toronto VIA EDGAR

Montréal U.S. Securities and Exchange Commission

Calgary 100 F Street N.E. Washington, D.C. 20549

Ottawa Attention: Dorrie Yale and Erin Jaskot

Vancouver

Re: Acasti Pharma Inc.

Post-Effective Amendment No. 1 to Registration Statement on Form F-1

Filed September 21, 2018 File No. 333-220755

Ladies and Gentlemen:

On behalf of Acasti Pharma Inc. (the "Company"), we are today filing with the U.S. Securities and Exchange Commission (the "Commission") the Amendment No. 1 to Post-Effective Amendment No. 1 (the "Amendment No. 1") to the Company's registration statement on Form F-1, first filed on September 29, 2017 and declared effective by the Commission on December 19, 2017. This Amendment No. 1 is filed with the Commission in response to the comment received from the staff's letter dated October 1, 2018.

For ease of review, the staff's comment has been reproduced below in italics, followed by the Company's response.

Post-effective Amendment to Form F-1

General

1. We note that you have omitted substantially all of the disclosure required by Part I of Form F-1 in this post-effective amendment to your registration statement on Form F-1. Please amend to include all of the disclosures required by Part I. Refer to Rule 472(b) of the Securities Act of 1933, as amended.

Response: Concurrently herewith, the Company has filed Amendment No. 1, which includes disclosures required by Part I of Form F-1. Pursuant to General Instruction VI of Form F-1, the Company has elected to incorporate by reference reports filed by the Company under the Securities Exchange Act of 1934, as amended, to provide the information required by Item 3 and Item 4 of Form F-1 in accordance with Item 4A and Item 5 of Form F-1.

Should you have any questions, please contact the undersigned at 212-991-2533.

Sincerely,

/s/ Jason Comerford

cc: Janelle D'Alvise, Acasti Pharma Inc.
Linda O'Keefe, Acasti Pharma Inc.
Jean-François Boily, Acasti Pharma Inc.

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