924.85

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form S-8 REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

Milestone Pharmaceuticals Inc.

(Exact name of registrant as specified in its charter)

Québec (State or other jurisdiction of incorporation or organization) Not applicable (IRS employer identification number)

1111 Dr. Frederik-Philips Boulevard, Suite 420 Montréal, Québec CA (Address of Principal Executive Offices)

H4M 2X6 (Zip Code)

2019 Equity Incentive Plan 2019 Employee Share Purchase Plan (Full titles of the plans)

Joseph Oliveto Chief Executive Officer Milestone Pharmaceuticals USA Inc. 7422 Carmel Executive Park Drive Suite 300 Charlotte, NC 28226 (514) 336-0444

(Name, address, including zip code and telephone number, including area code, of agent for service)

Copies to:
Ryan S. Sansom
Marc Recht
Divakar Gupta
Cooley LLP
500 Boylston Street, 14th Floor
Boston, MA 02116
(617) 937-2300

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" in Rule 12b-2 of the Exchange Act.	1 0 1	-	
Large accelerated filer $\ \square$	Accelerated filer		
Non-accelerated filer ⊠	Smaller reporting company	X	
	Emerging growth company	\boxtimes	
If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section $7(a)(2)(B)$ of the Securities Act. \boxtimes			

CALCULATION OF REGISTRATION FEE

Title of Securities To Be Registered	Amount To Be Registered ⁽¹⁾	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
2019 Equity Incentive Plan				

(Common shares, no par value per share) 1,193,119 shares⁽²⁾ \$ 7.11(4) \$ 8,477,110.50(4) \$

2019 Employee Share Purchase Plan	298,279 shares ⁽³⁾	\$ 7.11(4) \$ 2,119,272.30(4) \$	231.21
(Common shares, no par value per share)	,		
TOTAL		— \$ 10.596.382.79 \$	1.156.07

Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover any (1)additional common shares that become issuable under the above-named plans by reason of any share dividend, share split, recapitalization or any other similar transaction effected without receipt of consideration which results in an increase in the number of Milestone Pharmaceuticals Inc.'s (the "Registrant") outstanding common shares, no par value per share (the "Common Shares").

- Represents Common Shares that were automatically added to the shares authorized for issuance under the Milestone Pharmaceuticals Inc. 2019 (2) Equity Incentive Plan (the "2019 Plan") on January 1, 2021 pursuant to an "evergreen" provision contained in the 2019 Plan.
- Represents Common Shares that were automatically added to the shares authorized for issuance under the Milestone Pharmaceuticals Inc. 2019 (3)Employee Share Purchase Plan (the "2019 ESPP") on January 1, 2021 pursuant to an "evergreen" provision contained in the 2019 ESPP.
- (4) Estimated in accordance with Rule 457(c) and Rule 457(h) of the Securities Act solely for purposes of calculating the registration fee, and is based upon the price of \$7.11 per share, which was the average of the high and low prices of one of the Registrant's Common Shares as reported on the Nasdaq Global Select Market on March 23, 2021 (rounded up to the nearest cent).

INCORPORATION BY REFERENCE OF CONTENTS OF REGISTRATION STATEMENT ON FORM S-8

This Registration Statement is being filed by Milestone Pharmaceuticals Inc. (the "Registrant") for the purpose of registering (i) an additional 1,193,119 common shares issuable pursuant to the Milestone Pharmaceuticals Inc. 2019 Equity Incentive Plan (the "2019 EIP") and (i) an additional 298,279 common shares issuable pursuant to the Milestone Pharmaceuticals Inc. 2019 Employee Share Purchase Plan (the "2019 ESPP"). These additional common shares are securities of the same class as other securities for which a Registration Statement on Form S-8 of the Registrant relating to the same employee benefit plans is effective. The Registrant previously registered common shares for issuance under the 2019 EIP and 2019 ESPP under Registration Statements on Form S-8 filed with the Securities and Exchange Commission (the "Commission") on May 9, 2019 (File No. 333-231347) and March 6, 2020 (File No. 333-236971). Pursuant to General Instruction E to Form S-8, this Registration Statement hereby incorporates by reference the contents of the Registration Statement referenced above.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8. Exhibits.

The exhibits to this Registration Statement are listed below:

Exhibit Number	Exhibit Description
<u>4.1</u>	Amended Articles of Incorporation (incorporated herein by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-38899), filed with the SEC on May 15, 2019).
4.2	Amended and Restated Bylaws (incorporated herein by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-38899), filed with the SEC on May 15, 2019).
<u>4.3</u>	Form of Common Share Certificate (incorporated herein by reference to Exhibit 4.1 to Amendment No. 1 to the Registrant's Registration Statement on Form S 1 (File No. 333-230846), filed with the SEC on April 29, 2019).
4.4	2019 Equity Incentive Plan (incorporated herein by reference to Exhibit 4.8 to the Registrant's Registration Statement on Form S-8 (File No. 333-231347), filed with the SEC on May 9, 2019)
<u>4.5</u>	Form of U.S. Stock Option Grant Notice and Stock Option Agreement under the 2019 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.4 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 (File No. 333-230846), filed with the SEC on April 29, 2019).
<u>4.6</u>	Form of U.S. Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement under the 2019 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.5 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 (File No. 333-230846), filed with the SEC on April 29, 2019).
<u>4.7</u>	Form of Canadian Stock Option Grant Notice and Option Agreement under the 2019 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.6 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 (File No. 333-230846), filed with the SEC on April 29, 2019).
4.8	Form of Canadian Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement under the 2019 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.7 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 (File No. 333-230846), filed with the SEC on April 29, 2019).
<u>4.9</u>	2019 Employee Share Purchase Plan (incorporated herein by reference to Exhibit 4.13 to the Registrant's Registration Statement on Form S-8 (File No. 333-231347), filed with the SEC on May 9, 2019).
<u>5.1</u>	Opinion of Osler, Hoskin & Harcourt LLP.
<u>23.1</u>	Consent of PricewaterhouseCoopers LLP, an Independent Registered Public Accounting Firm.
<u>23.2</u>	Consent of Osler, Hoskin & Harcourt LLP. (included in Exhibit 5.1).
<u>24.1</u>	Power of Attorney (included on the signature page to this Registration Statement).

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Montréal, Province of Québec, Canada on March 29, 2021.

Milestone Pharmaceuticals Inc.

By: /s/ Joseph Oliveto

Joseph Oliveto

President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Joseph Oliveto and Amit Hasija, and each or any one of them, his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his or her substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Joseph Oliveto Joseph Oliveto	President, Chief Executive Officer and Director (Principal Executive Officer)	March 29, 2021
/s/ Amit Hasija Amit Hasija	Chief Financial Officer (Principal Financial and Accounting Officer)	March 29, 2021
/s/ Debra K. Liebert Debra K. Liebert	Director	March 29, 2021
/s/ Richard Pasternak Richard Pasternak, M.D.	Director	March 29, 2021
/s/ Michael Tomsicek Michael Tomsicek	Director	March 29, 2021
/s/ Paul Truex Paul Truex	Director	March 29, 2021
/s/ Lisa Giles Lisa Giles	Director	March 29, 2021
/s/ Robert Wills Robert Wills	Director	March 29, 2021

SIGNATURE OF AUTHORIZED U.S. REPRESENTATIVE OF THE REGISTRANT

Pursuant to the Securities Act, the undersigned, the duly authorized representative in the United States of Milestone Pharmaceuticals Inc. has signed this registration statement or amendment thereto on the 29th day of March, 2021.

MILESTONE PHARMACEUTICALS USA, INC.

By: /s/ Joseph Oliveto

Joseph Oliveto

President and Chief Executive Officer

March 29, 2021

Milestone Pharmaceuticals Inc.

1111 Dr. Frederik-Philips Boulevard, Suite 420 Montreal, Québec H4M 2X6

Dear Sirs/Mesdames:

Re: Milestone Pharmaceuticals Inc. - Registration Statement on Form S-8

We have acted as Canadian counsel to Milestone Pharmaceuticals Inc. (the "Corporation"), a corporation governed by the *Business Corporations Act* (Québec), in connection with the registration of up to 1,491,398 common shares of the Corporation, consisting of (i) up to 1,193,119 common shares of the Corporation (the "2019 Shares") issuable pursuant to the Corporation's 2019 equity incentive plan (the "2019 Plan"), and (ii) up to 298,279 common shares of the Corporation (the "ESPP Shares" and, collectively with the 2019 Shares, the "Shares") issuable pursuant to the Corporation's 2019 employee share purchase plan (the "ESPP" and, collectively with the 2019 Plan, the "Plans"), pursuant to a Registration Statement on Form S-8 (the "Registration Statement") filed on March 29, 2021 with the Securities and Exchange Commission under the *Securities Act of 1933*, as amended, relating to the registration of the Shares.

We have examined the Registration Statement, the Plans and all such corporate and public records, statutes and regulations and have made such investigations and have reviewed such other documents as we have deemed relevant and necessary and have considered such questions of law as we have considered relevant and necessary in order to give the opinion hereinafter set forth. As to various questions of fact material to such opinions which were not independently established, we have relied upon a certificate of an officer of the Corporation.

In reviewing the foregoing documents and in giving this opinion, we have assumed the legal capacity of all individuals, the genuineness of all signatures, the veracity of the information contained therein, the authenticity of all documents submitted to us as originals and the conformity to authentic or original documents of all documents submitted to us as certified, conformed, electronic, photostatic or facsimile copies.

We are qualified to practice law in the Province of Québec and this opinion is rendered solely with respect to the Province of Québec and the federal laws of Canada applicable in the Province of Québec.

On the basis of the foregoing, we are of the opinion that, when the Shares shall have been issued and sold pursuant to the terms of the Plans and the Registration Statement, the Shares will be validly issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement.

Yours very truly,

(signed) Osler, Hoskin & Harcourt LLP

Osler, Hoskin & Harcourt LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of Milestone Pharmaceuticals Inc. of our report dated March 29, 2021 relating to the consolidated financial statements, which appears in the Form 10-K for the year ended December 31, 2020.

/s/ PricewaterhouseCoopers LLP Montréal, Québec, Canada March 29, 2021