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

**FORM S-1
REGISTRATION STATEMENT**
*UNDER
THE SECURITIES ACT OF 1933*

HELIUS MEDICAL TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

3845
(Primary Standard Industrial
Classification Code Number)

36-4787690
(I.R.S. Employer
Identification Number)

**642 Newtown Yardley Road, Suite 100
Newtown, Pennsylvania 18940
(215) 944-6100**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Dane C. Andreeff
Interim President and Chief Executive Officer
Helius Medical Technologies, Inc.
642 Newtown Yardley Road, Suite 100
Newtown, Pennsylvania 18940
(215) 944-6100

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

Copies to:
Phillip D. Torrence, Esq.
Meredith Ervine, Esq.
Honigman LLP
650 Trade Centre Way, Suite 200
Kalamazoo, Michigan 49002
(269) 337-7702

Approximate date of commencement of proposed sale to public: From time to time after this Registration Statement is declared effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Table of Contents

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging Growth Company	<input checked="" type="checkbox"/>

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.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee
Class A Common Stock, par value \$0.001 per share	6,567,868	\$0.3845(5)	\$2,525,345.25	\$275.52
Class A Common Stock, par value \$0.001 per share, issuable upon exercise of warrants issued on October 26, 2020	2,673,718(2)	\$0.4520(6)	\$1,208,520.54	\$131.85
Class A Common Stock, par value \$0.001 per share, issuable upon exercise of warrants issued on October 26, 2020	610,218(3)	\$0.4619(6)	\$281,859.70	\$30.76
Class A Common Stock, par value \$0.001 per share, issuable upon exercise of warrants issued on October 26, 2020	33,654(4)	\$0.5650(6)	\$19,014.51	\$2.08
Total	9,885,458		\$4,034,740	\$440.21

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the “Securities Act”), this registration statement also covers any additional number of additional shares of common stock issuable upon stock splits, stock dividends, dividends or other distribution, recapitalization or similar events with respect to the shares of common stock being registered pursuant to this registration statement.
- (2) Represents shares of common stock issuable upon exercise of certain warrants to purchase common stock, at an exercise price currently fixed at \$0.4520 per share, to be offered and sold by the selling stockholders identified in this registration statement.
- (3) Represents shares of common stock issuable upon exercise of certain warrants to purchase common stock, at an exercise price currently fixed at \$0.4619 per share, to be offered and sold by the selling stockholders identified in this registration statement.
- (4) Represents shares of common stock issuable upon exercise of certain warrants to purchase common stock, at an exercise price currently fixed at \$0.5650 per share, to be offered and sold by the selling stockholders identified in this registration statement.
- (5) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(c) under the Securities Act, based upon the average of the high and low prices for a share of the registrant’s Class A Common Stock as reported on the Nasdaq Capital Market on November 20, 2020.
- (6) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(g) and Rule 457(c) under the Securities Act, based upon the higher of (i) the price at which the warrants may be exercised and (ii) the average of the high and low prices for a share of the registrant’s Class A Common Stock as reported on the Nasdaq Capital Market on November 20, 2020.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until this Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to such Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. The Selling Stockholders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, dated November 25, 2020

Preliminary Prospectus



9,885,458 Shares of Class A Common Stock, consisting of 6,567,868 Shares of Class A Common Stock and 3,317,590 Shares of Common Stock issuable upon exercise of Warrants

This prospectus relates to the resale, from time to time, of an aggregate of 9,885,458 shares of our Class A Common Stock, par value \$0.001 per share (the "Common Stock") by the selling stockholders listed on page 13 (the "Selling Stockholders") issued in connection with a private placement on October 26, 2020 (the "Private Placement"), including (i) 6,567,868 shares of Common Stock (the "Shares"); (ii) 3,283,936 shares of Common Stock issuable upon exercise of certain outstanding warrants issued to investors (the "Purchaser Warrants"); and (iii) 33,654 shares of Common Stock issuable upon exercise of certain outstanding warrants issued to the placement agent in the Private Placement (the "Placement Agent Warrants", and together with the "Purchaser Warrants", the "Warrants").

We are not selling any securities under this prospectus and we will not receive proceeds from the sale of Common Stock by the Selling Stockholders. However, we may receive proceeds from the cash exercise of the Warrants, which, if exercised in cash at the current applicable exercise price with respect to all of the 3,317,590 shares of Common Stock, would result in gross proceeds of approximately \$1.5 million. We sold the Shares and Warrants to the Selling Stockholders under a purchase agreement, dated October 21, 2020 (the "Purchase Agreement"), for gross proceeds of approximately \$3.4 million on October 26, 2020. For a more detailed description of the Shares and Warrants, see "*Sale of Securities to Selling Stockholders*".

We will pay the expenses of registering the shares of Common Stock offered by this prospectus, but all selling and other expenses incurred by each Selling Stockholder will be paid by such Selling Stockholder. The Selling Stockholders may sell the shares of our Common Stock offered by this prospectus from time to time on terms to be determined at the time of sale through ordinary brokerage transactions or through any other means described in this prospectus under "*Plan of Distribution*." The prices at which the Selling Stockholders may sell shares will be determined by the prevailing market price for shares of our Common Stock or in negotiated transactions.

Our Common Stock is listed on The Nasdaq Capital Market, or Nasdaq, under the symbol "HSMT" and on the Toronto Stock Exchange, or TSX, under the symbol "HSM." On November 24, 2020, the last reported sale price of our Common Stock as reported on (a) Nasdaq was US \$0.40 per share and (b) the TSX was CAD\$0.465 per share. See "*Description of Capital Stock – Common Stock Listing*."

Investing in our Common Stock involves a high degree of risk. Before making any investment in our Common Stock, you should read and carefully consider the risks described in this prospectus under the section of this prospectus entitled "Risk Factors" on page 5 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed on the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2020

TABLE OF CONTENTS

	<u>Page</u>
PROSPECTUS SUMMARY	1
THE OFFERING	4
RISK FACTORS	5
CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS	6
USE OF PROCEEDS	7
SALE OF SECURITIES TO SELLING STOCKHOLDERS	8
DESCRIPTION OF CAPITAL STOCK	9
SELLING STOCKHOLDERS	13
PLAN OF DISTRIBUTION	16
LEGAL MATTERS	18
EXPERTS	18
WHERE YOU CAN FIND ADDITIONAL INFORMATION	19
INCORPORATION OF CERTAIN INFORMATION BY REFERENCE	19

This prospectus is part of a registration statement on Form S-1 that we filed with the Securities and Exchange Commission (“SEC”). It omits some of the information contained in the registration statement and reference is made to the registration statement for further information with regard to us, the Selling Stockholders and the securities being offered. You should review the information and exhibits in the registration statement for further information about us, the Selling Stockholders and the securities being offered hereby. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to the full document. You should review the complete document to evaluate these statements.

You should read this prospectus, any documents that we incorporate by reference in this prospectus and the additional information described under the sections entitled “*Where You Can Find Additional Information*” and “*Incorporation of Certain Information by Reference*” before making an investment decision. You should rely only on the information contained or incorporated by reference in this prospectus. Neither we nor the Selling Stockholders have authorized any other person to provide you with different information. If anyone provides you with additional, different or inconsistent information, you should not rely on it. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

You should not assume that the information in this prospectus or any documents we incorporate by reference herein is accurate as of any date other than the date on the front of such document. Our business, financial condition, results of operations and prospects may have changed since those dates.

For investors outside the United States: neither we nor any of the Selling Stockholders has done anything that would permit this offering or possession or distribution of this prospectus or any free writing prospectus we may provide to you in connection with this offering in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of our Common Stock and the distribution of this prospectus and any such free writing prospectus outside of the United States.

[Table of Contents](#)

For residents of Canada: Unless permitted by Canadian securities laws, the shares of Common Stock offered under this prospectus (including the shares of Common Stock issuable on exercise of the warrants) may not be resold to any Canadian resident or through the facilities of the Toronto Stock Exchange until February 27, 2021, being the date that is four months and one day after the date of issuance of the shares of Common Stock and warrants

References in this prospectus to “\$” or “US\$” are to United States dollars. Canadian dollars are indicated by the symbol “CAD\$”.

In this prospectus, we rely on and refer to information and statistics regarding our industry. We obtained this statistical, market and other industry data and forecasts from publicly available information.

PROSPECTUS SUMMARY

This summary highlights information contained in other parts of this prospectus and in the documents incorporated by reference. Because it is a summary, it does not contain all of the information that you should consider in making your investment decision. Before investing in our Common Stock, you should carefully read this prospectus and the documents incorporated by reference in their entirety including “Risk Factors” included in this prospectus and incorporated by reference and “Management’s Discussion and Analysis of Financial Condition and Results of Operation” and the financial statements and the notes to those financial statements incorporated by reference in this prospectus before investing in our Common Stock. When used herein, unless the context requires otherwise, references to the “Company,” “we,” “our” and “us” refer to Helius Medical Technologies, Inc., a Delaware corporation.

All trademarks or trade names referred to in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend the use or display of other companies’ trademarks and trade names to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

Company Overview

We are a neurotech company focused on neurological wellness. Our purpose is to develop, license and acquire unique and non-invasive platform technologies that amplify the brain’s ability to heal itself.

Our first product, known as the Portable Neuromodulation Stimulator, or PoNS™, is authorized for sale in Canada as a class II, non-implantable, medical device intended as a short term treatment (14 weeks) of gait deficit due to mild and moderate symptoms from multiple sclerosis (MS), and chronic balance deficit due to mild-to-moderate traumatic brain injury (mTBI) and is to be used in conjunction with physical therapy (PoNS Treatment™). The PoNS™ is an investigational medical device in the United States, the European Union (“EU”), and Australia (“AUS”). The device is currently under review for de novo classification and clearance by the U.S. Food and Drug Administration (the FDA) as a potential treatment for gait deficit due to symptoms of MS. It is also under premarket review by the AUS Therapeutic Goods Administration. PoNS Treatment™ is currently not commercially available in the United States, the European Union or Australia.

Corporate History

NeuroHabilitation Corporation, or NHC, a Delaware corporation, incorporated on January 22, 2013, is involved in the medical device industry. In January 2013, HMI entered into an exclusive rights agreement whereby Advanced Neuro-Rehabilitation LLC, or ANR, granted NHC exclusive worldwide rights to ANR’s trade secrets, knowhow and patent pending technology for a non-invasive means for delivering neurostimulation through the oral cavity, in exchange for a 50% equity investment in NHC and a 4% royalty of NHC’s revenue collected from (a) the U.S. sales of products covered by any claim of the patent pending rights to end users and (b) services related to the therapy or use of such products in therapy services.

On June 13, 2014, we acquired a 100% interest in NHC pursuant to a plan of merger whereby our wholly-owned subsidiary was merged with and into NHC and all of the common shares in the capital of NHC were cancelled in consideration for the issuance of an aggregate of 7,060,016 shares of our Class A Common Stock to the shareholders of NHC. NHC, which changed its name to Helius Medical, Inc. in December 2018, is now our wholly-owned subsidiary. Prior to the transaction we had no active business.

On January 31, 2019, we formed another wholly owned subsidiary, Helius NeuroRehab, Inc., a Delaware corporation. On October 10, 2019, we formed Helius Canada Acquisition Ltd., a company incorporated under the federal laws of Canada and a wholly owned subsidiary of Helius Medical Technologies (Canada), Inc., a company incorporated under the federal laws of Canada, which acquired Heuro Canada, Inc. from Health Tech Connex Inc. on October 30, 2019.

Summary Risk Factors

Our business is subject to a number of risks that you should be aware of before making a decision to invest in our Common Stock. These risks are more fully described under the heading “Risk Factors” in this prospectus and the section entitled “Risk Factors” in our Annual Report, which is incorporated by reference in this prospectus. These risks include, among others, that:

- We have a history of losses and may not achieve or sustain profitability in the future;
- We will require additional financing to carry out our plan of operations, and failure to obtain such financing may cause our business to fail;
- We currently only have one product candidate, the PoNS device, which is authorized for commercial distribution in Canada, and we have not obtained authorization to distribute the PoNS device commercially in the United States, Europe or Australia and may never obtain such authorization;
- We may encounter substantial delays in planned clinical trials, and planned clinical trials may fail to demonstrate the safety and efficacy of the PoNS device to the satisfaction of regulatory authorities;
- Generation of revenue related to the PoNS technology is dependent on the PoNS treatment being prescribed by physicians and our ability to train physical therapists in the supervision of the use of the PoNS treatment;
- Market awareness of the PoNS device is limited, and the neuromodulation market is new and uncertain;
- We face significant competition in our market;
- We are dependent on third-party scientists and research institutions, in part, for research and development and on third parties for the manufacture and distribution of our product;
- The COVID-19 pandemic and outbreaks of communicable diseases may continue to materially and adversely affect our business, financial condition and results of operations;
- Third parties may gain access to our technology if our intellectual property protection is insufficient;
- We may be subject to various litigation claims and legal proceedings, including intellectual property litigation, which may adversely affect our business;
- Commercialization of our product outside of Canada is dependent on obtaining market authorization from the FDA and foreign regulatory authorities, which will require significant time, research, development, and clinical study expenditures and ultimately may not be successful;
- Failure to secure contracts with workers’ compensation and third-party administrators or rehabilitation clinics could have a negative impact on our sales and would have a material adverse effect on our business, financial condition and operating results;
- Failure to obtain a reimbursement code from the U.S. Department of Health and Human Services so that the PoNS device is covered by Medicare and Medicaid could have a negative impact on our intended sales and would have a material adverse effect on our business, financial condition and operating results;
- If we fail to comply with healthcare laws, we could face substantial penalties and financial exposure;

- We face ongoing government scrutiny and regulation in connection with the development of product candidates and following marketing authorization;
- After commercialization, a product recall or the discovery of serious safety issues with our products could have a significant adverse impact on us;
- We have been the victim of a cyber-related crime, and our controls may not be successful in avoiding future cyber-related crimes; and
- If we are unable to comply with the applicable Nasdaq continued listing requirements or standards, Nasdaq could delist our common stock.

Corporate Information

We are incorporated in the state of Delaware under the name Helius Medical Technologies, Inc. Our principal executive offices are located at 642 Newtown Yardley Road, Suite 100, Newtown, Pennsylvania 18940, and our telephone number is (215) 944-6100. Our website address is www.heliusmedical.com. We have included our website address in this prospectus solely as an inactive textual reference. The information on, or that can be accessed through, our website is not part of this prospectus, and you should not rely on any such information in making the decision whether to purchase securities.

THE OFFERING

Common Stock offered by the Selling Stockholders	9,885,458 shares
Common Stock outstanding immediately prior to this offering (as of October 31, 2020)	51,922,480 shares
Common Stock to be outstanding immediately following this offering assuming exercise of all Warrants	55,240,070 shares
Use of proceeds	We will not receive any proceeds from the sale by the Selling Stockholders of the shares of Common Stock being offered by this prospectus.
Risk Factors	You should read the “ <i>Risk Factors</i> ” section of this prospectus and in documents incorporated by reference into this prospectus for a discussion of certain factors to consider before deciding to purchase any of our securities.
Current Market for Common Stock	Our Common Stock is listed on Nasdaq under the symbol “HSDT” and on the TSX under the symbol “HSM.”

The number of shares of Common Stock to be outstanding after this offering is based on 51,922,480 shares of Common Stock outstanding as of October 31, 2020 and unless otherwise indicated, excludes the following:

- 4,550,945 shares of Common Stock issuable upon the exercise of stock options outstanding as of October 31, 2020, at a weighted-average exercise price of \$4.86 per share;
- 6,903,160 shares of Common Stock issuable upon the exercise of warrants (excluding the Warrants) outstanding as of October 31, 2020, at a weighted-average exercise price of US\$1.56, and 2,392,285 shares of Common Stock issuable upon the exercise of warrants outstanding as of October 31, 2020, at a weighted-average exercise price of CAD\$12.25 (or US\$9.20 based on the exchange rate on October 31, 2020);
- 2,755,955 shares of Common Stock reserved for future issuance under our 2018 Omnibus Incentive Plan as of October 31, 2020; and
- an aggregate of 16,755 shares of fully-vested restricted stock granted prior to October 31, 2020.

RISK FACTORS

An investment in our Common Stock is speculative and involves a high degree of risk including the risk of a loss of your entire investment. You should carefully consider the following risk factors, as well as those set forth under the heading “Risk Factors” in our [Annual Report on Form 10-K for the year ended December 31, 2019](#), and our [Quarterly Report on Form 10-Q for the quarter ended September 30, 2020](#), each of which is incorporated by reference in this prospectus as the same may be amended, supplemented or superseded by the risks and uncertainties described in similar headings in the other documents that are filed by us after the date hereof and incorporated in this prospectus.

Additional risks and uncertainties not presently known or which we consider immaterial as of the date hereof may also have an adverse effect on our business. See “Cautionary Note Regarding Forward-Looking Statements.”

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents we incorporate by reference, contains forward-looking statements within the meaning of Section 27A of the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

You should carefully read this prospectus, including the documents we incorporate by reference, and any related free writing prospectus and with the understanding that our actual future results may materially differ from what we expect.

Except as required by law, forward-looking statements speak only as of the date they are made, and we assume no obligation to update any forward-looking statements publicly, or to update the reasons why actual results could differ materially from those anticipated in any forward-looking statements, even if new information becomes available.

USE OF PROCEEDS

We are not selling any securities under this prospectus and will not receive any proceeds from the sale of shares of Common Stock offered by this prospectus by the Selling Stockholders. However, we may receive proceeds from the cash exercise of the Warrants, which, if exercised in cash at the current exercise price with respect to all Warrants, would result in gross proceeds to us of approximately \$1.5 million. The proceeds from such Warrant exercises, if any, will be used for working capital and general corporate purposes. We cannot predict when or whether the Warrants will be exercised, and it is possible that some or all of the Warrants may expire unexercised. For information about the Selling Stockholders, see “*Selling Stockholders*.”

The Selling Stockholders will pay any underwriting discounts and commissions and expenses incurred by the Selling Stockholders for brokerage or legal services or any other expenses incurred by the Selling Stockholders in disposing of the shares of Common Stock offered hereby. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares of Common Stock covered by this prospectus, including all registration and filing fees and fees and expenses of our counsel and accountants.

SALE OF SECURITIES TO SELLING STOCKHOLDERS

On October 21, 2020, we entered into the Purchase Agreement with the Selling Stockholders, pursuant to which we agreed to sell and issue, the Shares and Purchaser Warrants at purchase price of \$0.52 per unit, consisting of one Share and a Warrant to purchase 0.50 shares of Common Stock, resulting in total gross proceeds to us of approximately \$3.4 million before deducting placement agent fees and estimated offering expenses. The Purchaser Warrants have an initial exercise price of \$0.452 per share. The Private Placement closed on October 26, 2020. Purchasers in the Private Placement include affiliates of Maple Leaf Partners, L.P., for which Dane C. Andreeff, our Interim President and Chief Executive Officer serves as General Partner, and Joyce LaViscount, our Chief Financial Officer, Chief Operating Officer and Secretary. Affiliates of Maple Leaf Partners, L.P. agreed to purchase 1,182,301 Shares and Warrants to purchase 591,149 share of Common Stock for an aggregate purchase price of \$620,000 in the Private Placement, and Ms. LaViscount has agreed to purchase 38,138 Shares and Warrants to purchase 19,069 shares of Common Stock for an aggregate purchase price of \$20,000 in the Private Placement. Such affiliated persons participated in the Private Placement on the same terms and conditions as all other purchasers, except that they had a purchase price of \$0.5244 per unit, and their Warrants have an exercise price of \$0.4619 per share.

The Warrants are exercisable beginning on the date of issuance and will expire on the third anniversary of such date. Prior to expiration, subject to the terms and conditions set forth in the Warrants, the holders of such Warrants may exercise the Warrants for shares of Common Stock underlying the Warrants by providing notice to us and paying the exercise price per share for each share so exercised.

Pursuant to the Purchase Agreement, if we issue any shares of Common Stock or common stock equivalents for cash consideration, indebtedness or a combination thereof, with certain exceptions (the "Subsequent Financing") within twelve months after the closing of the Private Placement, each Purchaser whose purchases securities in the Private Placement totaling at least \$250,000.00 (an "Eligible Purchaser") has the right to participate in up to each Eligible Purchaser's pro rata portion of 30% of the Subsequent Financing on the same terms, conditions and price provided for in the Subsequent Financing.

Joseph Gunnar & Co., LLC (the "Placement Agent") acted as placement agent for us in connection with the Private Placement. We paid fees of approximately \$47,500 in the aggregate to the Placement Agent and to our former placement agent pursuant to a fee tail provision in the former placement agent's engagement letter. We also issued Warrants to the Placement Agent to purchase 33,654 shares of Common Stock (equal to 7% of the aggregate number of Shares issued to investors introduced by the Placement Agent), with an exercise price of \$0.565 per share. Subject to certain conditions, we also agreed to reimburse certain out-of-pocket expenses of the Placement Agent, including legal fees.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock and provisions of our Certificate of Incorporation and Amended and Restated Bylaws are summaries. You should also refer to the Certificate of Incorporation and the Amended and Restated Bylaws, which are filed as exhibits to the registration statement of which this prospectus is a part.

General

Our Certificate of Incorporation authorizes us to issue up to 150,000,000 shares of Class A Common Stock and 10,000,000 shares of preferred stock, par value \$0.001 per share, all of which shares of preferred stock are currently undesignated. Our board of directors may establish the rights and preferences of the preferred stock from time to time.

As of October 31, 2020, there were (i) 51,922,480 shares of Class A Common Stock outstanding; (ii) no outstanding shares of preferred stock; (iii) 16,755 fully-vested shares of restricted stock outstanding; (iv) 4,550,945 shares of Common Stock issuable upon the exercise of outstanding stock options; and (v) 12,613,035 shares of Common Stock issuable upon the exercise of outstanding warrants (including the Warrants).

Common Stock

Voting

Each holder of our Common Stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Our stockholders do not have cumulative voting rights. Because of this, the holders of a majority of the shares of Common Stock entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose.

Dividends

Subject to preferences that may be applicable to any then-outstanding preferred stock, holders of our Common Stock are entitled to receive ratably those dividends, if any, as may be declared from time to time by the board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our Common Stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of preferred stock.

Rights and Preferences

Holders of our Common Stock have no preemptive, conversion or subscription rights and there are no redemption or sinking fund provisions applicable to the Common Stock. The rights, preferences and privileges of the holders of our Common Stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

Preferred Stock

Our board of directors has the authority under our Certificate of Incorporation, without further action by our stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series, to establish from time to

[Table of Contents](#)

time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The purpose of authorizing our board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of us and may adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock on the rights of holders of common stock until the board of directors determines the specific rights attached to that preferred stock.

Anti-Takeover Provisions

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, those shares owned (1) by persons who are directors and also officers and (2) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines a “business combination” to include the following:

- merger or consolidation involving the corporation or any direct or indirect majority-owned subsidiary of the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder (in one transaction or a series of transactions);
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation or by any direct or indirect majority-owned subsidiary of the corporation of any stock of the corporation or of such subsidiary to the interested stockholder;
- any transaction involving the corporation or any direct or indirect majority-owned subsidiary of the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

[Table of Contents](#)

In general, Section 203 defines an “interested stockholder” as an entity or person who, together with the person’s affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

Certificate of Incorporation and Amended and Restated Bylaws

Our Certificate of Incorporation provides that the authorized number of directors may be changed only by resolution of the board of directors, and vacancies and newly created directorships on the board of directors may, except as otherwise required by law or determined by the board of directors, only be filled by a majority vote of the directors then serving on the board of directors, even though less than a quorum.

Our Amended and Restated Bylaws provide that all stockholder actions must be effected at a duly called meeting of stockholders and eliminate the right of stockholders to act by written consent without a meeting. Our Amended and Restated Bylaws also provide that only our Chairman of the board of directors, Chief Executive Officer or the board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors may call a special meeting of stockholders.

Our Amended and Restated Bylaws also provide that stockholders seeking to present proposals before a meeting of stockholders to nominate candidates for election as directors at a meeting of stockholders must provide timely advance notice in writing, and specify requirements as to the form and content of a stockholder’s notice. At any meeting of stockholders for the election of directors at which a quorum is present, the election will be determined by a plurality of the votes cast by the stockholders entitled to vote at the election.

Our Certificate of Incorporation and Amended and Restated Bylaws provide that the stockholders cannot amend many of the provisions described above except by a vote of 66 2/3% or more of our outstanding Common Stock. As described above, our Certificate of Incorporation gives our board of directors the authority, without further action by our stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series.

The combination of these provisions will make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change our control.

These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to reduce our vulnerability to hostile takeovers and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of delaying changes in our control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts. We believe that the benefits of these provisions, including increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure our company, outweigh the disadvantages of discouraging takeover proposals, because negotiation of takeover proposals could result in an improvement of their terms.

Choice of Forum

Our Certificate of Incorporation provides that the Court of Chancery of the State of Delaware will be the exclusive forum for:

- any derivative action or proceeding brought on our behalf;

[Table of Contents](#)

- any action asserting a breach of fiduciary duty;
- any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our Certificate of Incorporation or our Amended and Restated Bylaws; or
- any action asserting a claim against us that is governed by the internal affairs doctrine.

The provision does not apply to suits brought to enforce a duty or liability created by the Exchange Act.

The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with any action, a court could find the choice of forum provisions contained in our Certificate of Incorporation to be inapplicable or unenforceable in such action. Our Certificate of Incorporation further provides that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, subject to and contingent upon a final adjudication in the State of Delaware of the enforceability of such exclusive forum provision.

Registration Rights of A&B

Pursuant to the terms of convertible notes issued to A&B (HK) Company Limited in October 2015 and December 2015, we agreed to register any shares issued upon the conversion of such convertible notes upon the request of A&B (HK) Company Limited. As of October 31, 2020, A&B (HK) Company Limited beneficially owned 2,699,828 shares of Common Stock that were issued upon the conversion of such convertible notes.

Transfer Agent and Registrar

The transfer agent and the registrar for the Company is Computershare Investor Services Inc., located at 100 University Avenue, 8th Floor, Toronto, Ontario, M5J 2Y1 and 510 Burrard Street, 2nd Floor, Vancouver, British Columbia, V6C 3B4.

Common Stock Listing

Our Common Stock is listed on Nasdaq under the symbol "HSDT" and on the TSX under the symbol "HSM."

SELLING STOCKHOLDERS

The shares of Common Stock being offered by the Selling Stockholders include the Shares, and shares of common stock issuable to the Selling Stockholders upon exercise of the Warrants. For additional information regarding the issuances of the Shares and Warrants, see “*Sale of Securities to Selling Stockholders*”. We are registering the shares of Common Stock in order to permit the Selling Stockholders to offer the shares for resale from time to time.

The table is based on information supplied to us by the Selling Stockholders, with beneficial ownership and percentage ownership determined in accordance with the rules and regulations of the SEC, and includes information with respect to voting or investment power with respect to shares of stock. This information does not necessarily indicate beneficial ownership for any other purpose.

The percentage of each Selling Stockholder’s ownership is based on 51,922,480 shares of Common Stock outstanding as of October 31, 2020. In computing the number of shares beneficially owned by a Selling Stockholder and the percentage ownership of that Selling Stockholder, shares of Common Stock underlying the Warrants held by that Selling Stockholder that are exercisable as of October 31, 2020, or exercisable within 60 days after October 31, 2020, are deemed outstanding. Such shares, however, are not deemed outstanding for the purposes of computing the percentage ownership of any other person. The percentage of beneficial ownership after this offering is based on shares outstanding on October 31, 2020 and also includes the shares of our Common Stock registered hereby, assuming full exercise of the Warrants.

The registration of the shares of Common Stock issuable to the Selling Stockholders upon exercise of the Warrants does not mean that the Selling Stockholders will sell or otherwise dispose of all or any of those securities. The Selling Stockholders may sell or otherwise dispose of all, a portion or none of such shares from time to time. We do not know the number of shares, if any, that will be offered for sale or other disposition by any of the Selling Stockholders under this prospectus. Furthermore, the Selling Stockholders may have sold, transferred or disposed of the shares of Common Stock covered hereby in transactions exempt from the registration requirements of the Securities Act since the date on which we filed this prospectus.

Table of Contents

To our knowledge and except as noted below, the Selling Stockholders have not, nor within the past three years have had, any position, office or other material relationship with us or any of our predecessors or affiliates. The Selling Stockholders may sell all, some or none of the shares of Common Stock subject to this prospectus. See “Plan of Distribution.”

Name of Selling Stockholder	Beneficial Ownership Before This Offering		Shares Offered Hereby	Shares Underlying Warrants Offered Hereby	Beneficial Ownership After This Offering	
	Number of Shares Owned	Percentage of Outstanding Shares(1)			Number of Shares Owned	Percentage of Outstanding Shares(1)
Porter Partners, L.P.	2,826,951(2)	5.4%	480,769	240,385	2,105,797	4.1%
Maple Leaf Discovery I, L.P.	640,971(3)(15)	1.2%	371,883	185,941	83,147	*
Maple Leaf Offshore, Ltd.	56,044(4)(15)	*	37,363	18,681	0	—
Maple Leaf Partners, L.P.	1,098,300(5)(15)	2.1%	638,182	319,091	141,027	*
Maple Leaf Partners I, L.P.	233,236(6)(15)	*	134,873	67,436	30,927	*
Karl L. Matthies Trust	721,154(7)	1.4%	480,769	240,385	0	—
Willian Qualified Spendthrift Trust	532,693(8)	1.0%	288,462	144,231	100,000	*
Kirk E. Fisher	576,923	1.1%	384,615	192,308	0	—
Ardara Capital, LP	721,154(9)	1.4%	480,769	240,385	0	—
LG Health & Technology District Ltd.	576,923(10)	1.1%	384,615	192,308	0	—
Anne M. Fisher	432,693	*	288,462	144,231	0	—
Lawrence Fisher	432,693	*	288,462	144,231	0	—
Barretto Revocable Trust	538,462(11)	1.0%	192,308	96,154	250,000	*
Cavalry Fund I LP	721,154(12)	1.4%	480,769	240,385	0	—
Columbus Capital Partners, L.P.	5,628,228(13)	9.9%	1,000,000	500,000	4,128,228	8.0%
Thomas Kautzsch	174,989	*	116,659	58,330	0	—
Intracoastal Capital, LLC	721,155(14)	1.4%	480,770	240,385	0	—
Joyce N. LaViscount	710,919(15)	1.4%	38,138	19,069	653,712	1.3%
Joseph A. Alagna Jr.	16,826	*	0	16,826	0	*
Stephan A. Stein	10,096	*	0	10,096	0	*
Anthony Sica	6,731	*	0	6,731	0	*

* Represents beneficial ownership of less than one percent (1%) of the outstanding shares of our Common Stock.

(1) Based upon 51,922,480 shares of Common Stock issued and outstanding as of October 31, 2020.

(2) Jeffrey H. Porter has voting control and investment discretion over the securities reported herein that are held by Porter Partners, L.P.

(3) Dane Andreeff has voting control and investment discretion over the securities reported herein that are held by Maple Leaf Discovery I, L.P.

(4) Dane Andreeff has voting control and investment discretion over the securities reported herein that are held by Maple Leaf Offshore, Ltd.

(5) Dane Andreeff has voting control and investment discretion over the securities reported herein that are held by Maple Leaf Partners, L.P.

(6) Dane Andreeff has voting control and investment discretion over the securities reported herein that are held by Maple Leaf Partners I, L.P.

(7) Karl L. Matthies has voting control and investment discretion over the securities reported herein that are held by the Karl L. Matthies Trust.

(8) John Willian has voting control and investment discretion over the securities reported herein that are held by the Willian Qualified Spendthrift Trust.

(9) Patrick Mullin has voting control and investment discretion over the securities reported herein that are held by Ardara Capital, LP.

(10) Lawrence Fisher has voting control and investment discretion over the securities reported herein that are held by LG Health & Technology District Ltd.

Table of Contents

- (11) Edwin Barretto has voting control and investment discretion over the securities reported herein that are held by the Barretto Revocable Trust.
- (12) Thomas Walsh has voting control and investment discretion over the securities reported herein that are held by Cavalry Fund I LP.
- (13) Includes 5,128,228 shares of Common Stock, and 500,000 shares of Common Stock issuable upon the exercise of warrants. Columbus Capital Management, LLC, which serves as the general partner and investment manager to each of Columbus Capital QP Partners, L.P., Columbus Capital Partners, L.P., and Columbus Capital Offshore QP Fund, LTD. (collectively “the Funds”), and Mr. Matthew D. Ockner, as Managing Member of Columbus Capital Management, LLC, with the power to exercise investment and voting discretion, may be deemed to be the beneficial owner of all shares of Common Stock held by the Funds. The business address of Matthew D. Ockner is 1 Embarcadero Center, Suite 1130, San Francisco, CA 94111. The percentage in this table reflects that the reporting persons may not exercise the warrants to the extent such exercise would cause the reporting persons to beneficially own a number of shares of common stock that would exceed 9.99% of our then outstanding common stock following such exercise.
- (14) Mitchell P. Kopin and Daniel B. Asher, each of whom are managers of Intracoastal Capital LLC (“Intracoastal”), have shared voting control and investment discretion over the securities, and as a result, each of Mr. Kopin and Mr. Asher may be deemed to have beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended) of the securities reported herein that are held by Intracoastal.
- (15) The Selling Stockholder is, or is an affiliate of, a director or officer of the Company.

PLAN OF DISTRIBUTION

Each Selling Stockholder of the securities and any of their pledgees, assignees and successors-in-interest may from time to time, sell any or all of their securities covered hereby on the principal trading market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or at prices then prevailing or related to the then current market price or at negotiated prices. The offering price of the shares from time to time will be determined by the Selling Stockholders and, at the time of the determination, may be higher or lower than the market price of our Common Stock. A Selling Stockholder may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- in transactions through broker-dealers that agree with the Selling Stockholders to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The Selling Stockholders may also sell securities under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus.

Notwithstanding the foregoing, each Selling Stockholder that is not a resident of Canada has agreed with the Company that prior to February 27, 2021, the securities covered hereby may not be resold or transferred into Canada or to a resident of Canada through the facilities of the Toronto Stock Exchange or otherwise. Except in compliance with Canadian securities laws, each Selling Stockholder that is a resident of Canada may not resell the securities covered hereby until February 27, 2021.

Broker-dealers engaged by the Selling Stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Stockholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

In connection with the sale of the securities or interests therein, the Selling Stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The Selling Stockholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The Selling Stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

Table of Contents

The Selling Stockholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each Selling Stockholder has informed the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

We are required to pay certain fees and expenses incurred by us incident to the registration of the securities. We have agreed to indemnify the Selling Stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

We agreed to use our commercially reasonable best efforts to keep the registration statement of which this prospectus forms a part continuously effective until no purchaser owns any Warrants or Warrant shares issuable upon exercise of the Warrants. The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the Common Stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Selling Stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the Common Stock by the Selling Stockholders or any other person. We will make copies of this prospectus available to the Selling Stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

We will not receive any proceeds from the sale of the shares by the Selling Stockholders.

LEGAL MATTERS

The validity of the issuance of the shares of Common Stock offered hereby will be passed upon for us by Honigman LLP, Kalamazoo, Michigan.

EXPERTS

The consolidated financial statements as of December 31, 2019 and 2018 and for the years then ended incorporated by reference in this Prospectus and in the Registration Statement have been so incorporated in reliance on the report of BDO USA, LLP, an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting. The report on the consolidated financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the Common Stock offered by this prospectus. This prospectus, which is part of the registration statement, omits certain information, exhibits, schedules and undertakings set forth in the registration statement. For further information pertaining to us and our Common Stock, reference is made to our SEC filings and the registration statement and the exhibits and schedules to the registration statement. Statements contained in this prospectus as to the contents or provisions of any documents referred to in this prospectus are not necessarily complete, and in each instance where a copy of the document has been filed as an exhibit to the registration statement, reference is made to the exhibit for a more complete description of the matters involved.

In addition, registration statements and certain other filings made with the SEC electronically are publicly available through the SEC's web site at <http://www.sec.gov>. The registration statement, including all exhibits and amendments to the registration statement, has been filed electronically with the SEC.

We are subject to the information and periodic reporting requirements of the Exchange Act, and, in accordance with such requirements, will file periodic reports, proxy statements, and other information with the SEC. These periodic reports, proxy statements, and other information will be available for inspection and copying at the web site of the SEC referred to above. We also maintain a website at <http://www.heliusmedical.com>, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not part of, and is not incorporated into, this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" in this prospectus much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or any document previously incorporated by reference herein have been modified or superseded.

We incorporate by reference into this prospectus and the registration statement of which this prospectus forms a part the information or documents listed below that we have filed with the SEC, and any future filings we will make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act (other than information furnished under Item 2.02 or Item 7.01 of Form 8-K or Schedule 14A) and until the termination or completion of the offering of the securities covered by this prospectus:

- our Annual Report on Form 10-K for the year ended December 31, 2019, filed with the SEC on [March 12, 2020](#), as amended on [September 8, 2020](#);
- our Quarterly Reports on Form 10-Q for the quarter ended March 31, 2020, filed with the SEC on [May 11, 2020](#), the quarter ended June 30, 2020, filed with the SEC on [August 12, 2020](#), and the quarter ended September 30, 2020, filed with the SEC on [November 12, 2020](#);
- our Current Reports on Form 8-K filed with the SEC on [March 18, 2020](#), [March 24, 2020](#), [March 27, 2020](#), [April 16, 2020](#), [April 22, 2020](#), [April 30, 2020](#), [May 7, 2020](#), [May 12, 2020](#), [June 12, 2020](#) (as amended on [July 2, 2020](#)), [July 14, 2020](#), [August 6, 2020](#), [August 25, 2020](#), [October 7, 2020](#), [October 19, 2020](#), [October 21, 2020](#), [October 26, 2020](#) and [November 24, 2020](#); and

Table of Contents

- the description of our Class A Common Stock included in our registration statement on [Form 8-A](#) filed on April 4, 2018, including any amendments or reports filed for the purposes of updating this description.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus, including exhibits to these documents. You should direct any requests for documents to Helius Medical Technologies, Inc., Attn: Chief Financial Officer, 642 Newtown Yardley Road, Suite 100, Newtown PA 18940, or via e-mail at inquiry@heliusmedical.com. Our phone number is (215) 944-6104.

You also may access these filings on our website at <http://www.heliusmedical.com>. We do not incorporate the information on our website into this prospectus or any supplement to this prospectus and you should not consider any information on, or that can be accessed through, our website as part of this prospectus or any supplement to this prospectus (other than those filings with the SEC that we specifically incorporate by reference into this prospectus or any supplement to this prospectus).



9,885,458 Shares of Class A Common Stock

PRELIMINARY PROSPECTUS

, 2020

PART II**INFORMATION NOT REQUIRED IN PROSPECTUS****Item 13. Other Expenses of Issuance and Distribution**

The following table sets forth the costs and expenses, other than the underwriting discounts and commissions, payable by the registrant in connection with the sale of Common Stock being registered. All amounts are estimates except for the SEC registration fee.

Item	Amount to be paid
SEC registration fee	\$ 440.21
Legal fees and expenses	\$ 20,000.00
Printing and engraving expenses	\$ 5,000.00
Transfer agent fees and expenses	\$ 1,000.00
Accounting fees and expenses	\$ 15,000.00
Miscellaneous fees and expenses	\$ 3,559.79
Total	\$ 45,000.00

Item 14. Indemnification of Directors and Officers

We are incorporated under the laws of the State of Delaware. Section 102 of the Delaware General Corporation Law permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his or her duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he or she is or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

As permitted by the Delaware General Corporation Law, our amended and restated bylaws provide that: (1) we are required to indemnify our directors and executive officers to the fullest extent permitted by the Delaware General Corporation Law; (2) we may, in our discretion, indemnify our other officers, employees and agents as set forth in the Delaware General Corporation Law; (3) we are required, upon satisfaction of certain conditions, to advance all expenses incurred by our directors and executive officers in connection with certain legal proceedings; (4) the rights conferred in the bylaws are not exclusive; (5) we are authorized to enter into indemnification agreements with our directors, officers, employees and agents; and (6) we may secure insurance on behalf of any director, officer, employee or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law.

Table of Contents

We have entered into indemnification agreements with our directors and officers. These agreements provide broader indemnity rights than those provided under the Delaware General Corporation Law and our Certificate of Incorporation. The indemnification agreements are not intended to deny or otherwise limit third-party or derivative suits against us or our directors or officers, but to the extent a director or officer were entitled to indemnity or contribution under the indemnification agreement, the financial burden of a third-party suit would be borne by us, and we would not benefit from derivative recoveries against the director or officer. Such recoveries would accrue to our benefit but would be offset by our obligations to the director or officer under the indemnification agreement.

We maintain a directors' and officers' liability insurance policy. The policy insures directors and officers against unindemnified losses arising from certain wrongful acts in their capacities as directors and officers and reimburses us for those losses for which we have lawfully indemnified the directors and officers. The policy contains various exclusions.

Item 15. Recent Sales of Unregistered Securities

The following sets forth information regarding all unregistered securities sold by the registrant in the three years preceding the date of this registration statement.

On March 18, 2020, we entered into a securities purchase agreement with certain purchasers, pursuant to which we agreed to sell and issue to such purchasers, in a registered direct offering, an aggregate of 6,257,144 of our Common Stock at a purchase price of \$0.35 per share. Pursuant to the purchase agreement, in a concurrent private placement, on March 20, 2020 we issued to the purchasers warrants to purchase up to 6,257,144 shares of Common Stock. The warrants are exercisable beginning on September 21, 2020 at an exercise price of \$0.46 per share and expire on September 22, 2025.

On October 21, 2020, we entered into the Purchase Agreement with the Selling Stockholders, pursuant to which we agreed to sell and issue, in a private placement, an aggregate of 6,567,868 shares of Common Stock. Pursuant to the Purchase Agreement, we also issued 3,283,936 Warrants. The Warrants have an initial exercise price of \$0.452 per share and expire on October 26, 2023, except that Warrants issued to insiders, and affiliates of insiders, have an initial exercise price of \$0.4619 per share and expire on October 26, 2023.

Unless otherwise noted, the transactions described in Item 15 were exempt from registration under the Securities Act pursuant to Section 4(a)(2) of the Securities Act in that such sales did not involve a public offering, under Rule 701 promulgated under the Securities Act, in that they were offered and sold either pursuant to written compensatory plans or pursuant to a written contract relating to compensation, as provided by Rule 701, or under Rule 506 of Regulation D promulgated under the Securities Act.

Item 16. Exhibits and financial statement schedules

(a) Exhibits

The following exhibits are being filed with this Registration Statement:

<u>Exhibit Number</u>	<u>Exhibit</u>
3.1	<u>Certificate of Conversion filed with the Delaware Secretary of State on July 18, 2018 (incorporated by reference to Exhibit 3.1 to the Form 10-Q filed August 9, 2018)</u>
3.2	<u>Certificate of Incorporation, as corrected (incorporated by reference to Exhibit 3.1 to the Form 8-K filed October 30, 2018)</u>
3.3	<u>Bylaws as amended and restated (incorporated by reference to Exhibit 3.3 to the Form 10-Q filed August 9, 2018)</u>

Table of Contents

<u>Exhibit Number</u>	<u>Exhibit</u>
4.1	Form of Warrant (incorporated by reference to Exhibit 4.1 to the Form 8-K filed March 18, 2020)
4.2	Form of Warrant to Purchase Common Stock issued pursuant to the Securities Purchase Agreement, dated October 21, 2020 (incorporated by reference to Exhibit 4.1 to the Form 8-K filed on October 26, 2020)
5.1	Opinion of Honigman LLP
10.1*	Separation and Release Agreement between Helius Medical Technologies, Inc. and Philippe Deschamps, dated August 23, 2020 (incorporated by reference to Exhibit 10.2 to the Form 8-K filed with the SEC on August 25, 2020)
10.2*	Interim President and CEO Employment Letter Agreement Between Helius Medical Technologies, Inc. and Dane C. Andreeff dated August 23, 2020 (incorporated by reference to Exhibit 10.1 to the Form 8-K filed with the SEC on August 25, 2020)
10.3*	Employment Agreement between Helius Medical Technologies, Inc. and Jonathan Sackier, dated December 1, 2014 (incorporated by reference to Exhibit 10.4 to the Form 10-12G filed with the SEC on April 15, 2015)
10.4*	Consulting Agreement between Helius Medical, Inc. and Mitch Tyler, dated December 10, 2014 (incorporated by reference to Exhibit 10.5 to the Form 10-12G filed with the SEC on February 6, 2015)
10.5	License Agreement between Advanced NeuroRehabilitation, LLC and Yuri Danilov, Mitchell Tyler, Kurt Kaczmarek and John Klus, dated June 29, 2011 (incorporated by reference to Exhibit 10.8 to the Amendment to Form S-1 filed with the SEC on September 23, 2014)
10.6	Amended and Restated Patent Sub-License Agreement between Advanced NeuroRehabilitation, LLC and Helius Medical, Inc, having an effective date of January 22, 2013 (incorporated by reference to Exhibit 10.1 to the Form S-1 filed with the SEC on July 14, 2014)
10.7	Second Amended and Restated Patent Sub-License Agreement between Advanced NeuroRehabilitation, LLC and Helius Medical, Inc, dated June 6, 2014, but having an effective date of January 22, 2013 (incorporated by reference to Exhibit 10.7 to the Form S-1 filed with the SEC on July 14, 2014)
10.8	Master Cooperative Research and Development Agreement between Helius Medical, Inc, Advanced NeuroRehabilitation, LLC, Yuri Danilov, Mitchell Tyler, Kurt Kaczmarek and U.S. Army Medical Material Agency and U.S. Army Medical Material Development Activity, dated effective February 1, 2013 (incorporated by reference to Exhibit 10.2 to the Form S-1 filed with the SEC on July 14, 2014)
10.9	Notice of Modification No. 1 to Cooperative Research and Development Agreement between Helius Medical, Inc, Advanced NeuroRehabilitation, LLC, Yuri Danilov, Mitchell Tyler, Kurt Kaczmarek and U.S. Army Medical Material Agency and U.S. Army Medical Material Development Activity, dated April 29, 2014 (incorporated by reference to Exhibit 10.5 to the Form S-1 filed with the SEC on July 14, 2014)
10.10	Notice of Modification No. 2 to Cooperative Research and Development Agreement between Helius Medical, Inc, Advanced NeuroRehabilitation, LLC, Yuri Danilov, Mitchell Tyler, Kurt Kaczmarek and U.S. Army Medical Material Agency and U.S. Army Medical Material Development Activity, dated January 12, 2015 (incorporated by reference to Exhibit 10.12 to the Form 10-12G filed with the SEC on February 6, 2015)

Table of Contents

<u>Exhibit Number</u>	<u>Exhibit</u>
10.11	<u>Design and Manufacturing Consultant Agreement between Helius Medical, Inc. and Clinvue, LLC, dated January 30, 2013 (incorporated by reference to Exhibit 10.3 to the Form S-1 filed with the SEC on July 14, 2014)</u>
10.12	<u>Commercial Development-to-Supply Program between Helius Medical, Inc. and Ximedica, dated October 25, 2013 (incorporated by reference to Exhibit 10.4 to the Form S-1 filed with the SEC on July 14, 2014)</u>
10.13*	<u>Employment Agreement between Helius Medical Technologies, Inc. and Joyce LaViscount, dated October 19, 2015 (incorporated by reference to Exhibit 10.3 to the Form 10-Q filed with the SEC on February 16, 2016)</u>
10.14‡	<u>Asset Purchase Agreement between the Company and A&B (HK) Company Limited, dated as of October 9, 2015 (incorporated by reference to Exhibit 2.1 to the Form 8-K filed with the SEC on October 16, 2015)</u>
10.14.1	<u>Amendment to Asset Purchase Agreement between the Company and A&B (HK) Company Limited, dated as of October 30, 2017 (incorporated by reference to Exhibit 10.1 to the Form 8-K filed with the SEC on November 2, 2017)</u>
10.14.2	<u>Supplemental Agreement to Asset Purchase Agreement Dated October 9, 2015, between Helius Medical, Inc. and A&B (HK) Company Limited, dated as of August 15, 2018 (incorporated by reference to Exhibit 10.27 to the Form 10-K filed March 14, 2019)</u>
10.15	<u>Sole-source cost sharing contract between Helius Medical, Inc. and the U.S. Army Medical Research and Materiel Command (USAMRMC) dated as of July 7, 2015 (incorporated by reference to Exhibit 10.22 to the Form S-1 filed with the SEC on May 4, 2016)</u>
10.15.1	<u>Amendment to Sole-Source Cost Sharing Contract between Helius Medical, Inc. and the U.S. Army Medical Research and Materiel Command (USAMRMC), dated November 7, 2016 (incorporated by reference to Exhibit 10.2 to the Form 8-K filed with the SEC on November 21, 2016)</u>
10.16*	<u>Amended and Restated June 2014 Equity Incentive Plan (incorporated by reference to Exhibit 4.3 to the Form 10-Q filed with the SEC on November 9, 2017)</u>
10.16.1*	<u>2014 Stock Incentive Plan Form of Option Grant Agreement (incorporated by reference to Exhibit 10.23.1 to the Transition Report on Form 10-K filed with the SEC on April 3, 2017)</u>
10.17*	<u>2016 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.25 to the Transition Report on Form 10-K filed with the SEC on April 3, 2017)</u>
10.17.1*	<u>Amendment Number 1 to the 2016 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.25.1 to the Transition Report on Form 10-K filed with the SEC on April 3, 2017)</u>
10.17.2*	<u>Amendment Number 2 to the 2016 Omnibus Incentive Plan (incorporated by reference to Exhibit 4.7 to the Registration Statement on Form S-8 filed with the SEC on May 18, 2017)</u>
10.17.3*	<u>2016 Omnibus Incentive Plan Form of U.S. Option Grant Agreement (incorporated by reference to Exhibit 4.8 to the Registration Statement on Form S-8 filed with the SEC on May 18, 2017)</u>
10.17.4*	<u>2016 Omnibus Incentive Plan Form of Canada Option Grant Agreement (incorporated by reference to Exhibit 4.9 to the Registration Statement on Form S-8 filed with the SEC on May 18, 2017)</u>
10.18	<u>Commercial lease agreement dated March 29, 2017 between Helius Medical, Inc. and 660 Tudor Square, L.P. (incorporated by reference to Exhibit 10.26 to the Transition Report on Form 10-K filed with the SEC on April 3, 2017)</u>

Table of Contents

<u>Exhibit Number</u>	<u>Exhibit</u>
10.19‡	Commercial contract manufacturing agreement dated December 29, 2017 between Helius Medical, Inc. and Key Tronic Corporation (incorporated by reference to Exhibit 10.29 to the Form 10-K filed March 12, 2018)
10.20‡	Employment agreement between Helius Medical Technologies, Inc. and Jennifer Laux, dated July 9, 2018, (incorporated by reference to Exhibit 10.1 to the Form 10-Q filed August 9, 2018)
10.21*	2018 Omnibus Incentive Plan, as amended (incorporated by reference to Exhibit 10.2 to the Form 10-Q filed November 8, 2018)
10.21.1*	2018 Omnibus Incentive Plan Form of Option Grant Agreement (incorporated by reference to Exhibit 10.3 to the Form 10-Q filed November 8, 2018)
10.21.2*	2018 Omnibus Incentive Plan Form of Restricted Stock Unit Grant Agreement (incorporated by reference to Exhibit 10.4 to the Form 10-Q filed November 8, 2018)
10.21.3*	2018 Omnibus Incentive Plan Form of 2020 Retention Grant (incorporated by reference to Exhibit 10.1 to the Form 8-K filed on October 7, 2020)
10.22	Warrant Indenture dated April 18, 2016 by and between Helius Medical Technologies, Inc. and Computershare Investor Services Inc. (incorporated by reference to Exhibit 4.1 to Amendment No. 1 to the Form 8-K filed April 18, 2016 and amended on April 20, 2016)
10.23	Warrant Indenture dated April 11, 2018 by and between Helius Medical Technologies, Inc. and Computershare Trust Company of Canada (incorporated by reference to Exhibit 4.1 to the Form 8-K filed April 12, 2018)
10.24	Form of Securities Purchase Agreement (incorporated by reference to Exhibit 10.1 to the Form 8-K filed March 18, 2020)
10.25+	Form of Securities Purchase Agreement dated October 21, 2020 (incorporated by reference to Exhibit 10.1 to the Form 8-K filed on October 26, 2020)
10.26	Non-Employee Director Compensation Policy, effective as of June 10, 2020 (incorporated by reference to Exhibit 10.5 to the Form 10-Q filed on November 12, 2020)
21.1	Subsidiaries of Helius Medical Technologies, Inc. (incorporated by reference to Exhibit 21.1 to the Form 10-K filed March 12, 2020)
23.1	Consent of BDO USA, LLP
23.2	Consent of Honigman LLP (included in Exhibit 5.1 hereto)
24.1	Power of Attorney (included in signature page hereto)

* Indicates a management contract or compensatory plan.

‡ Confidential information has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been granted with respect to this omitted information.

Schedules and exhibits to this agreement have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The Company agrees to furnish any omitted schedules or exhibits upon the request of the Securities and Exchange Commission. A list of the omitted schedules and exhibits to this agreement is as follows: Exhibit A: Schedule of Purchasers; Exhibit B: Form of Warrant; Exhibit C: Accredited Investor Qualification Questionnaire; Exhibit D: Bad Actor Questionnaire; and Exhibit E: Selling Stockholder Questionnaire.

(b) Financial Statement Schedules

All schedules have been omitted because either they are not required, are not applicable or the information is otherwise set forth in the financial statements and related notes thereto.

Item 17. Undertakings

- (a) The undersigned registrant hereby undertakes:
- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;
 - (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
 - (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
 - (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A (§ 230.430A of this chapter), shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by

[Table of Contents](#)

controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

- (d) The undersigned Registrant hereby undertakes that:
 - (1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
 - (2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Newton, State of Pennsylvania, on November 25, 2020.

Helius Medical Technologies, Inc.

By: /s/ Dane C. Andreeff
Dane C. Andreeff
Interim President, Chief Executive Officer and Director

KNOW ALL MEN BY THESE PRESENTS, that the undersigned officers and directors of Helius Medical Technologies, Inc., a Delaware corporation, do hereby constitute and appoint each of Dane C. Andreeff and Joyce LaViscount as his or her true and lawful attorney-in-fact and agent, with full power of substitution and re-substitution, for him and in his name, place, and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments, exhibits thereto and other documents in connection therewith) to this Registration Statement and any subsequent registration statement filed by the registrant pursuant to Rule 462(b) of the Securities Act of 1933, as amended, which relates 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 attorney-in-fact and agent 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 might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, 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-1 has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Dane Andreeff</u> Dane Andreeff	Interim President, Chief Executive Officer (Principal Executive Officer) and Director	November 25, 2020
<u>/s/ Joyce LaViscount</u> Joyce LaViscount	Chief Financial Officer and Chief Operating Officer (Principal Financial Officer and Principal Accounting Officer)	November 25, 2020
<u>/s/ Edward M. Straw</u> Edward M. Straw	Director	November 25, 2020
<u>/s/ Jeffrey Mathiesen</u> Jeffrey Mathiesen	Director	November 25, 2020
<u>/s/ Mitchell E. Tyler</u> Mitchell E. Tyler	Director	November 25, 2020
<u>/s/ Blane Walter</u> Blane Walter	Director	November 25, 2020

November 25, 2020

Helius Medical Technologies, Inc.
645 Newtown Yardley Road
Suite 100
Newtown, PA 18940

Re: Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel to Helius Medical Technologies, Inc., a Delaware corporation (the "Company"), and the Company has requested our opinion, in connection with preparing and filing with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), of a Registration Statement on Form S-1 (such registration statement as amended or supplemented from time to time, the "Registration Statement"), in connection with the registration under the Securities Act of the resale from time to time by selling stockholders of an aggregate of 9,885,458 shares of the Company's Class A Common Stock, par value \$0.001 per share (the "Common Stock"), including (i) 6,567,868 shares of Common Stock (the "Shares") issued to investors in a private placement (the "Private Placement"); (ii) 3,283,936 shares of Common Stock (the "Purchaser Warrant Shares") issuable upon exercise of certain outstanding warrants issued to investors in the Private Placement (the "Purchaser Warrants"); and (iii) 33,654 shares of Common Stock (the "Placement Agent Warrant Shares" and, together with the Purchaser Warrant Shares, the "Warrant Shares") issuable upon exercise of certain outstanding warrants issued to the placement agent in the Private Placement (the "Placement Agent Warrants" and, together with the Purchaser Warrants, the "Warrants").

For the purpose of rendering this opinion, we examined originals or copies of such documents as we deemed relevant. In conducting our examination, we assumed, without investigation, the genuineness of all signatures, the correctness of all certificates, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted as certified or photostatic copies, and the authenticity of the originals of such copies, and the accuracy and completeness of all records made available to us by the Company. In addition, in rendering this opinion, we have assumed (i) that the Warrants will be exercised before their resale in accordance with their terms and in the manner and on the terms identified or referred to in the Registration Statement, including all supplements and amendments thereto, and (ii) that the Warrant Shares will be properly delivered to the persons exercising the Warrants.

Our opinion is limited solely to matters set forth herein. The law covered by the opinion expressed herein is limited to the Delaware General Corporation Law. We are not rendering any opinion with respect to federal law, including federal securities laws, or state blue sky securities laws.

With respect to the Warrant Shares, we express no opinion to the extent that, notwithstanding the Company's current reservation of shares of Common Stock, future issuances of securities of the Company, including the Warrant Shares, and/or antidilution adjustments to outstanding securities of the Company, including the Warrants, may cause the Warrants to be exercisable for more shares of Common Stock than the number that then remain authorized but unissued.

Based upon our examination of such documents and other matters as we deem relevant, we are of the opinion that (i) the Shares are validly issued, fully paid and non-assessable, and (ii) upon valid exercise of the Warrants in accordance with their terms, including payment of the exercise price and issuance and delivery of the Warrant Shares as described therein, including proper execution and delivery to the persons exercising the Warrants of certificates for the underlying Warrant Shares (in the form approved by the Company's Board), the Warrant Shares issued will be validly issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement and to the reference to our firm under the caption "Legal Matters" in the Registration Statement. In giving such consent, we do not admit that we are within the category of persons whose consent is required by Section 7 of the Securities Act or the rules and regulations promulgated thereunder by the Commission. This opinion is expressed as of the date hereof, and we disclaim any undertaking to advise you of any subsequent changes in the facts stated or assumed herein or of any subsequent changes in applicable law.

Very truly yours,

/s/ Honigman LLP
Honigman LLP

EJJ/ME/RZK

Consent of Independent Registered Public Accounting Firm

Helius Medical Technologies, Inc.
Newtown, Pennsylvania

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement of our report dated March 12, 2020, relating to the consolidated financial statements of Helius Medical Technologies, Inc. appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2019. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ BDO USA, LLP

Philadelphia, Pennsylvania
November 25, 2020