# UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT NO.1 TO FORM F-10 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

# **FORM F-10**

# Titan Medical Inc.

(Exact name of registrant as specified in its charter)

# Ontario, Canada

(Province or other jurisdiction of incorporation or organization)

#### 3841

(Primary Standard Industrial Classification Code Number, if applicable)

# 98-0663504

(I.R.S. Employer Identification No., if applicable)

170 University Avenue, Suite 1000 Toronto, Ontario M5H 3B3 Canada Tel: (416) 548-7522

(Address and telephone number of Registrant's principal executive offices)

CT Corporation System 1015 15<sup>th</sup> Street N.W., Suite 1000 Washington, DC 20005 (202) 572-3100

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

Copies to:

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

# Province of Ontario, Canada

(Principal jurisdiction regulating this offering)

It is proposed that this filing shall become effective (check appropriate box below):

A.	$\boxtimes$	upon	filing with the Commission pursuant to Rule 467(a) (if in connection with an offering being made contemporaneously in the United States and Canada).
B.		at son	ne future date (check the appropriate box below):
	1.		pursuant to Rule 467(b) on ( ) at ( ) (designate a time not sooner than 7 calendar days after filing).
	2.		pursuant to Rule 467(b) on ( ) at ( ) (designate a time 7 calendar days or sooner after filing) because the securities regulatory authority in
			the review jurisdiction has issued a receipt or notification of clearance on ( ).
	3.		pursuant to Rule 467(b) as soon as practicable after notification of the Commission by the Registrant or the Canadian securities regulatory authority of
			the review jurisdiction that a receipt or notification of clearance has been issued with respect hereto.
	4.		after the filing of the next amendment to this Form (if preliminary material is being filed).
		0.1	
	If any	of the	securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to the home jurisdiction's shelf prospectus offering
proce	dures,	check t	he following box. □

# CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price per Security	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee(2)
Units, each unit consisting of one Common Share and a Warrant to Purchase a				
Common Share at \$4.00 per Common Share	7,352,941	\$ 3.40	\$ 25,000,000	*
Common Share included as part of the Unit(3)(4)	7,352,941	-	-	-
Warrant included as part of the Unit(3)(4)	7,352,941	-	-	-
Common Shares underlying Warrant <sup>(3)</sup>	7,352,941	\$ 4.00	\$ 29,411,765	*

Over-Allotment Units, each unit consisting of one Common Share and a Warrant to	1 102 041	Ф	2.40	Ф	2.750.000	
Purchase a Common Share at \$4.00	1,102,941	\$	3.40	\$	3,750,000	-
Common Share included as part of the Over-Allotment Unit(3)	1,102,941		-		-	-
Warrant included as part of the Over-Allotment Unit(3)(4)	1,102,941		-		-	*
Common Shares underlying Over-Allotment Warrants(3)	1,102,941	\$	4.00	\$	4,411,765	*
Broker Warrants(3)(4)	591,912		-		-	*
Common Shares underlying Broker Warrants(3)	591,912	\$	3.40	\$	2,012,500	*
Total				\$	64,586,029	\$ 7,828(5)

- (1) Estimated solely for the purpose of computing the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended (the "Act").
- (2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price of all securities being registered.
- (3) Pursuant to Rule 416 under the Act, the securities being registered hereunder include such indeterminate number of additional shares of common stock as may be issued after the date hereof as a result of stock splits, stock dividends or similar transactions.
- (4) No separate fee is required pursuant to Rule 457(g) under the Act.
- (5) \$3,030.00 previously paid in connection with the filing of the Registrant's Form F-10 filed on March 5, 2019.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registration Statement shall become effective as provided in Rule 467 under the Securities Act of 1933, as amended (the "Act") or on such date as the Commission, acting pursuant to Section 8(a) of the Act, may determine.

## INFORMATION REQUIRED TO BE DELIVERED TO OFFEREES OR PURCHASERS

## SHORT FORM PROSPECTUS

New Issue March 18, 2019



## TITAN MEDICAL INC.

Minimum: US \$20,000,000 (5,882,353 Units)

Maximum: US \$25,000,000 (7,352,941 Units)

Price: US \$3.40 per Unit

Titan Medical Inc. (the "Company" or "Titan" or "we" or "our") is hereby qualifying for distribution a minimum (the "Minimum Offering") of 5,882,353units of the Company (the "Units") and a maximum (the "Maximum Offering") of 7,352,941 Units, at a price of US \$3.40 per Unit (the "Offering Price"). Each Unit consists of one common share of the Company (an "Offered Share") and one common share purchase warrant of the Company (a "Warrant"). Each Warrant entitles the holder thereof to purchase one common share of the Company (a "Warrant Share") at an exercise price of US \$4.00 per Warrant Share, subject to adjustment, at any time until 5:00 p.m. (Toronto time) on the date that is 60 months after the first Closing Date (as defined herein) of the Offering (as defined herein) (the "Warrant Expiry Time"). The Units will immediately separate into Offered Shares and Warrants upon issuance. The distribution of the Units and the Broker Warrants (as defined herein) qualified by this short form prospectus is referred to herein as the "Offering". See "Description of Offered Securities".

The outstanding common shares of Titan ("Common Shares") are listed and posted for trading on the Toronto Stock Exchange (the "TSX") under the symbol "TMD" and on the Nasdaq Capital Market ("Nasdaq") under the symbol "TMDI". On March 15, 2019, the last trading day on the TSX prior to the date of this short form prospectus, the closing price of the Common Shares on the TSX was CDN \$4.44. On March 15, 2019, the last trading day on the Nasdaq prior to the date of this short form prospectus, the closing price of the Common Shares on the Nasdaq was US \$3.30. The Company has applied and has received the conditional approval of the TSX to list the Offered Shares, the Warrant Shares, the Over-Allotment Shares (as defined herein) and the Broker Warrant Shares (as defined herein) distributed under this short form prospectus on the TSX. The Company has notified Nasdaq of the listing of the Offered Shares, the Warrant Shares, the Over-Allotment Warrant Shares and the Broker Warrant Shares distributed under this short form prospectus on the Nasdaq. Listing will be subject to the Company fulfilling all of the listing requirements of the TSX and Nasdaq. There can be no assurance that the securities offered pursuant to this short form prospectus will be accepted for listing on the TSX or the Nasdaq. The Company does not intend to apply to list the Warrants or the Over-Allotment Warrants (as defined herein) on any securities exchange. There will be no market through which the Warrants or the Over-Allotment Warrants may be sold and purchasers may not be able to resell the Warrants or the Over-Allotment Warrants purchased in the Offering. This may affect the pricing of the Warrants or the Over-Allotment

Warrants in the secondary market, the transparency and availability of trading prices, the liquidity of the Warrants or the Over-Allotment Warrants, and the extent of issuer regulation. See "Risk Factors".

The Offering Price was determined by negotiation between the Company and Bloom Burton Securities Inc. (the "Agent"). Pursuant to the terms of an agency agreement (the "Agency Agreement") entered into between the Company and the Agent, the Units will be issued and sold in the provinces of British Columbia, Alberta and Ontario by the Agent. The Units will also be offered for sale in the United States, by or through one or more United States registered broker-dealers appointed by the Agent as sub-agents, pursuant to the Multijurisdictional Disclosure System ("MJDS") implemented by securities regulatory authorities in the United States and Canada. See "Plan of Distribution".

An investment in the securities offered hereunder is speculative and involves a high degree of risk. The risk factors identified in this short form prospectus and the documents incorporated by reference herein should be carefully reviewed and evaluated by prospective investors before purchasing the securities being offered hereunder. See "Risk Factors" in this short form prospectus and the documents incorporated by reference herein.

	Price: US \$3	.40 per Unit	
	Price to the Public	Agent's Commission(1)	Net Proceeds to the Company <sup>(2)</sup>
Per Unit(3)	US \$3.40	US \$0.238	US \$3.162
Minimum Offering <sup>(4)</sup>	US \$20,000,000	US \$1,400,000	US \$18,600,000
Maximum Offering <sup>(4)</sup>	US \$25,000,000	US \$1,750,000	US \$23,250,000

# **Notes:**

- (1) The Company has agreed to pay the Agent, on each Closing Date, a commission (the "Agent's Commission") equal to 7% of the aggregate gross proceeds of the Offering (or US \$0.238 per Unit) including any proceeds raised through the sale of Over-Allotment Units (as defined herein) and/or Over-Allotment Warrants pursuant to the exercise of the Over-Allotment Option (as defined herein). In addition to the Agent's Commission, the Company will issue to the Agent, on each Closing Date, compensation warrants ("Broker Warrants") to purchase such number of Common Shares (the "Broker Warrant Shares") as is equal to 7% of the aggregate number of Units and Over-Allotment Units issued pursuant to the Offering on such Closing Date. Each Broker Warrant, whether issued on the first Closing Date or on a subsequent Closing Date, shall entitle the Agent to acquire one Broker Warrant Share at an exercise price equal to the Offering Price, subject to adjustment, for a period of 24 months following the first Closing Date. See "Plan of Distribution". This short form prospectus also qualifies the distribution of the Broker Warrants.
- (2) After deducting the Agent's Commission, but before deducting expenses of the Offering (including listing fees) estimated to be approximately US \$600,000 in the event of the Minimum Offering, and US \$750,000 in the event of the Maximum Offering, which will be paid from the gross proceeds of the Offering.
- (3) From the Offering Price, the Company will allocate US \$1.32 to each Offered Share and US \$2.08 to each Warrant.
- (4) Assuming no exercise of the Over-Allotment Option.
- The Company has granted the Agent an option (the "Over-Allotment Option"), exercisable in whole or in part at any time and from time to time for a period from (5) the date hereof to 30 days following the first Closing Date, to offer for sale such number of additional Units (the "Over-Allotment Units") and/or Warrants (the "Over-Allotment Warrants") as is equal to 15% of the number of Units issued under the Offering, solely to cover over-allotments, if any, and for market stabilization purposes. The Over-Allotment Option may be exercised by the Agent in respect of: (i) Over-Allotment Units at the Offering Price; (ii) Over-Allotment Warrants at a price of US \$2.08 per Over-Allotment Warrant; or (iii) any combination of Over-Allotment Units and/or Over-Allotment Warrants, so long as the aggregate number of Over-Allotment Units and Over-Allotment Warrants does not exceed 15% of the number of Units issued under the Offering (excluding the Over-Allotment Option). Unless the context otherwise requires, references to the Units herein shall include the Over-Allotment Units and references to Warrants herein shall include the Over-Allotment Warrants. The Common Shares that are included in the Over-Allotment Units are referred to herein as the "Over-Allotment Shares" and the Common Shares issuable upon exercise of the Over-Allotment Warrants (including Warrants issuable as part of the Over-Allotment Units) are referred to herein as the "Over-Allotment Warrant Shares". If the Agent exercises the Over-Allotment Option in full under the Maximum Offering for Over-Allotment Units, the total price to the public will be US \$28,750,000, the aggregate Agent's Commission will be US \$2,012,500, and the net proceeds to the Company, before deducting the estimated expenses of the Offering, will be US \$26,237,500. This short form prospectus qualifies the grant of the Over-Allotment Option and the distribution of the Over-Allotment Units and/or Over-Allotment Warrants. A purchaser who acquires securities forming part of the Agent's over-allocation position acquires those securities under this short form prospectus, regardless of whether such over-allocation position is ultimately filled through the exercise of the Over-Allotment Option or through secondary market purchases. See "Plan of Distribution".

The following table sets out the number of Over-Allotment Units/Over-Allotment Warrants and Broker Warrants that may be issued by the Company to the Agent:

Agent's Position	Minimum Offering	Maximum Offering	<b>Exercise Period</b>	<b>Exercise Price</b>
Over- Allotment Option	Up to 882,353 Over-Allotment Units and/or Over-Allotment Warrants	Up to 1,102,941 Over-Allotment Units and/or Over-Allotment Warrants	From the date hereof to 30 days following the first Closing Date	US \$3.40 per Over-Allotment Unit and/or US \$2.08 per Over-Allotment Warrant
Broker Warrants <sup>(1)</sup>	61,765 Broker Warrants	77,206 Broker Warrants	24 months following the first Closing Date	US \$3.40 per Broker Warrant Share

#### Note:

# (1) Assuming no exercise of the Over-Allotment Option.

Subscriptions for Units will be received by the Agent subject to rejection or allotment in whole or in part, and the right is reserved to close the subscription books at any time without notice. It is anticipated that the Offered Shares and Warrants will be issued in "book-entry only" form and represented by a global certificate or certificates, or be represented by uncertificated securities, registered in the name of CDS Clearing and Depositary Services Inc. ("CDS") or its nominee or The Depository Trust Company ("DTC"), as directed by the Agent, and will be deposited with CDS or DTC, as the case may be. Except in limited circumstances, no beneficial holder of Offered Shares or Warrants will receive definitive certificates representing their interest in the Offered Shares or Warrants. Beneficial holders of Offered Shares or Warrants will receive only a customer confirmation from the Agent or another registered dealer who is a CDS or DTC participant and from or through whom a beneficial interest in the Offered Shares or Warrants is acquired. Certain other holders may receive definitive certificates representing their interests in the Offered Shares or Warrants.

The completion of the Offering may occur in one or more separate closings on one or more dates (each, a "Closing Date") as the Company and the Agent may agree. Provided that the Minimum Offering is subscribed for, it is expected that the first Closing Date will occur on or about March 21, 2019, or such other date as the Company and the Agent may agree.

If subscriptions for the Minimum Offering have not been received within 10 days following the date of issuance of a receipt for the final short form prospectus, the Offering will not continue and the subscription proceeds will be returned to subscribers, without interest or deduction. In any event, the total period of the distribution will not end more than 45 days from the date of issuance of a receipt for this short form prospectus. Should a closing occur in respect of the Minimum Offering, one or more additional closings, if necessary, may occur until the earlier of the Maximum Offering being subscribed and the expiry of the 45-day period.

There can be no assurance that any or all of the Units being offered will be sold. Please see 'Plan of Distribution''.

The Offering is not underwritten or guaranteed by any person. The Agent conditionally offers the Units pursuant to the securities legislation of the provinces of British Columbia, Alberta and Ontario on a best efforts basis and, subject to prior sale, if, as and when issued by the Company and delivered and accepted by the Agent in accordance with the conditions contained in the Agency Agreement referred to under "Plan of Distribution" and subject to approval of certain legal matters on behalf of the Company by Borden Ladner Gervais LLP, with respect to Canadian legal matters, and by Dorsey & Whitney LLP, with respect to U.S. legal matters, and on behalf of the Agent by Baker & McKenzie LLP. The United States registered broker-dealers that may be appointed by the Agent as sub-agents will not be registered as dealers in any Canadian jurisdiction and, accordingly, they will not, directly or indirectly, solicit offers to purchase or sell the Units in Canada. In connection with this distribution, the Agent may over-allot or effect transactions that stabilize or maintain the market price of the Common Shares at levels other than those which otherwise might prevail on the open market. If these activities are commenced, they may be discontinued by the Agent at any time. See "Plan of Distribution".

You should rely only on the information contained or incorporated by reference in this short form prospectus and the documents incorporated by reference herein. The Company and the Agent have not authorized anyone to provide purchasers with information different from that contained or incorporated by reference in this short form prospectus and the documents incorporated by reference herein. Information contained on the website of the Company shall not be deemed to be a part of this short form prospectus or incorporated herein by reference and should not be relied upon by prospective investors for the purpose of determining whether to invest under the Offering. The Company is offering to sell, and seeking offers to buy, the Units only in jurisdictions where, and to persons to whom, offers and sales are lawfully permitted. The Company does not undertake to update information contained or incorporated by reference in this short form prospectus, except as required by applicable securities laws.

This offering is made by a "foreign issuer" under U.S. securities laws that is permitted, under the MJDS, to prepare this short form prospectus in accordance with Canadian disclosure requirements. Prospective investors should be aware that such requirements are different from those of the United States. Except as otherwise disclosed, financial statements included or incorporated by reference herein have been prepared in accordance with International Financial Reporting Standards ("IFRS"), as issued by the International Accounting Standards Board, and are subject to Canadian auditing and auditor independence standards, and thus may not be comparable to financial statements of United States companies.

Prospective investors should be aware that the acquisition of the Units described herein may have tax consequences both in the United States and Canada. Such consequences for investors who are resident in, or citizens of, the United States may not be fully described herein. See "Certain Canadian Federal Income Tax Considerations" and "Certain United States Federal Income Tax Considerations" in this short form prospectus.

The enforcement by investors of civil liabilities under the United States federal securities laws may be affected adversely because the Company is organized under the laws of Canada, a number of its officers and directors and some or all of the experts named in this short form prospectus are Canadian residents or otherwise reside outside of the United States, and a substantial portion of the Company's assets and the assets of such persons are located outside the United States. See "Enforceability of Civil Liabilities" in this short form prospectus.

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION (THE "SEC") OR THE SECURITIES COMMISSION OF ANY STATE OF THE UNITED STATES, NOR HAVE THE FOREGOING PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

Each of David McNally, President, Chief Executive Officer and a director of the Company and John Schellhorn and Dr. Bruce Wolff, directors of the Company, resides outside of Canada (the "Non-Resident Directors"). The Non-Resident Directors have appointed the following agent for service of process:

#### Name of the Person or Company

David McNally John Schellhorn Dr. Bruce Wolff

## Name and Address of Agent

Titan Medical Inc. 170 University Avenue, Suite 1000 Toronto, Ontario, Canada M5H 3B3

Purchasers are advised that it may not be possible for investors to enforce judgements obtained in Canada against any person or company that is incorporated, continued or otherwise organized under the laws of a foreign jurisdiction or resides outside of Canada, even if the party has appointed an agent for service of process. See "Risk Factors".

Prospective investors should be aware that the acquisition or disposition of the securities described herein may have tax consequences in Canada. This short form prospectus may not describe these tax consequences fully. You should consult and rely on your own tax advisor with respect to your own particular circumstances. See "Certain Canadian Federal Income Tax Considerations".

In this short form prospectus, unless otherwise specified or the context otherwise requires, all dollar amounts are expressed in United States dollars. All references to "dollar", "\$" or "US \$" are to United States dollars. All references to "CDN \$" are to Canadian dollars. Potential purchasers should be aware that foreign exchange fluctuations are likely to occur from time to time and that the Company does not make any representation with respect to currency values from time to time. Investors should consult their own advisors with respect to the potential risk of currency fluctuations. See "Currency Presentation and Exchange Rate Information" in this short form prospectus.

The Company's head and registered office is located at 170 University Avenue, Suite 1000, Toronto, Ontario, M5H 3B3 and its telephone number is (416) 548-7522.

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## IMPORTANT NOTICE ABOUT THE INFORMATION IN THIS SHORT FORM PROSPECTUS

## General Advisory

You should rely only on the information contained in or incorporated by reference in this short form prospectus. Neither the Company nor the Agent has authorized anyone to provide you with different or additional information. Neither the Company nor the Agent is making an offer of the Units in any jurisdiction where the offer is not permitted by law. If anyone provides you with any different or inconsistent information, you should not rely on it. You should not assume that the information contained in or incorporated by reference in this short form prospectus is accurate as of any date other than the date on the front of this short form prospectus with respect to information contained herein and, with respect to information incorporated by reference, the date of such document so incorporated. The Company's business, financial condition, results of operations and prospects may have changed since those dates.

The Company is subject to the information requirements of the United States Securities Exchange Act of 1934, as amended (the "U.S. Exchange Act"), and applicable Canadian securities legislation, and in accordance therewith files reports and other information with the SEC and with the securities regulators in Canada. Under a MJDS adopted by the United States and Canada, documents and other information that the Company files with the SEC may be prepared in accordance with the disclosure requirements of Canada, which are different from those of the United States. As a foreign private issuer, the Company is exempt from the rules under the U.S. Exchange Act prescribing the filing, delivery and content of proxy statements, and its officers, directors and principal shareholders are exempt from the insider reporting and short-swing profit recovery provisions contained in Section 16 of the U.S. Exchange Act. In addition, the Company may not be required to publish financial statements as promptly as a comparable U.S. company.

#### **Additional Information**

You may read any document that the Company has filed with or furnished to the SEC at the SEC's public reference room located at 100 F Street, N.E., Washington, D.C. 20549. You may also obtain copies of any such document from the SEC's public reference room by paying a fee. You should call the SEC at 1-800-SEC-0330 or access its website at <a href="https://www.sec.gov">www.sec.gov</a> for further information about the public reference room. You may read and download any of the documents the Company has filed with or furnished to the SEC through its Electronic Data Gathering and Retrieval system ("EDGAR") at <a href="www.sec.gov">www.sec.gov</a>. You may read and download any public document that the Company has filed with the Canadian securities regulatory authorities at <a href="www.sedar.com">www.sedar.com</a>.

The Company has concurrently filed with the SEC under the United States Securities Act of 1933, as amended (the "U.S. Securities Act"), a registration statement on Form F-10, relating to the Offered Shares and Warrants being offered hereunder and of which this short form prospectus forms a part. This short form prospectus does not contain all of the information set forth in such registration statement, certain items of which are contained in the exhibits to the registration statement as permitted or required by the rules and regulations of the SEC. Items of information omitted from this short form prospectus but contained in the registration statement will be available on the SEC's website at www.sec.gov. Statements included in this short form prospectus or the documents incorporated by reference herein about the contents of any contract, agreement or other document referred to are not necessarily complete, and in each instance, prospective investors should refer to the exhibits for a complete description of the matter involved. Each such statement is qualified in its entirety by such reference.

# Market and Industry Data

Unless otherwise indicated, information contained in this short form prospectus concerning the Company's industry and the markets in which it plans to operate or seeks to operate, including its general expectations and market position, market opportunities and market share, is based on management studies and estimates, information from independent industry organizations and consultants, and other third-party sources (including industry publications, surveys and forecasts), such as Life Science Intelligence's Meddevicetracker October 2017 report titled "Global Robotically-Assisted Surgical Devices Market", number MDT 17015. These market research reports are subjective and speak as of their original publication dates (and not as of the date of this short form prospectus) and the opinions and market data expressed in those reports are subject to change without notice.

The Company believes that these sources are generally reliable, but the accuracy and completeness of this information is not guaranteed. The information presented in the reports noted above and any underlying assumptions for the market estimate and projections contained therein have not been independently verified.

While management believes the market position, market opportunity and market share information included in this short form prospectus is generally reliable, such information is inherently imprecise. In addition, projections, assumptions and estimates of future performance and the future performance of the industry and markets in which the Company plans to operate are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described under the headings "Special Note Regarding Forward-Looking Statements" and "Risk Factors".

#### **Trade-marks and Trade Names**

This short form prospectus includes references to the Company's trade-marks and trade names, such as SPORT, SPORT Surgical System, Titan and Titan Medical, some of which may be protected under applicable intellectual property laws of one or more countries and which the Company believes is its property. Solely for convenience, the Company's trade-marks referred to in this short form prospectus may appear without the TM symbol, but such references are not intended to indicate, in any way, its rights in such marks or that the Company will not assert, to the fullest extent under applicable law, its rights to these trade-marks and trade names. All other trade-marks and trade names referenced in this short form prospectus are the property of their respective owners.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This short form prospectus and the documents incorporated by reference in this short form prospectus contain "forward-looking information" and "forward-looking statements", within the meaning of applicable Canadian and United States securities laws (collectively herein referred to as "forward-looking statements"). These statements relate to future events or future performance and reflect the Company's expectations and assumptions regarding the growth, results of operations, performance and business prospects and opportunities of the Company. These forward-looking statements are made as of the date of this short form prospectus or, in the case of documents incorporated by reference herein, as of the date of such documents. Forward-looking statements are frequently, but not always, identified by words such as "expects", "expects", "expectation", "anticipates", "believes", "intends", "estimates", "predicts", "continues", "potential", "targeted", "plans", "possible" and similar expressions, or statements that events, conditions or results "will", "may", "could", "would" or "should" occur or be achieved. Any forward-looking statements or statements of "belief", including the statements made under "Risk Factors", represent the Company's estimates only as of the date of this short form prospectus and the documents incorporated by reference herein, respectively, and should not be relied upon as representing the Company's estimates as of any subsequent date. These forward-looking statements may concern anticipated developments in the Company's operations in future periods, the adequacy of the Company's financial resources and other events or conditions that may occur in the future, and include, without limitation, statements regarding:

- the Company's technology and research and development objectives, including development milestones, estimated costs, schedules for completion and probability of success;
- the Company's intention with respect to updating any forward-looking statement after the date on which such statement is made or to reflect the occurrence of unanticipated events;
- the Company's expectation with respect to continuing animal study feasibility and commencing human cadaver studies;
- the Company's expectation that it can in a timely manner produce the appropriate preclinical, and if necessary, clinical data required;
- the Company's expectation with respect to launching a commercial product in certain jurisdictions;
- the Company's intentions to develop a robust training curriculum and post-training assessment tools;
- the Company's plans to develop and commercialize the SPORT Surgical System and the estimated incremental costs (including the status, cost and timing of achieving the development milestones disclosed herein);

- the Company's plans to design, create and refine software for production system functionality of the SPORT Surgical System and the estimated incremental costs (including the status, cost and timing of achieving the development milestones disclosed herein);
- the Company's intentions to complete heuristic and formative usability modules and human factors studies, formalize user requirements, stabilize the design and development of the system and initiate preclinical studies;
- the Company's intentions with respect to initiating marketing activities following receipt of the applicable regulatory approvals;
- the surgical indications for, and the benefits of, the SPORT Surgical System;
- the Company's intention to continue to assess specialized skill and knowledge requirements and recruitment and retention of qualified personnel and partners;
- the Company's intention to pursue the recruitment of surgeons and hospitals for the required studies and to obtain approval from the IRB (as defined herein) of each hospital;
- the Company's belief that the materials and parts necessary for the manufacture of a clinical-grade SPORT Surgical System will be available in the marketplace;
- the Company's belief that its existing and planned prototype units will be suitable to support human factors studies and preclinical testing activities in 2019;
- the Company's filing and prosecution of patent applications to expand its intellectual property portfolio as technologies are developed or refined;
- the Company's seeking of licensing opportunities to expand its intellectual property portfolio;
- the Company's expectation that it will be able to finance its continuing operations by accessing public markets for its securities;
- the Company's intended use of proceeds of any offering of its securities;
- the Company's intention with respect to not paying any cash dividends on Common Shares in the foreseeable future;
- the Company's intention to retain future earnings, if any, to finance expansion and growth;
- the projected competitive conditions with respect to the Company's products;
- the estimated size of the market for robotic surgical systems;
- the potential market for the securities issuable under the Offering;
- over-allotment options or other transactions which would stabilize or maintain the market price of the Company's securities; and
- the Company's intention to reprice options granted to its current officers and employees.

Forward-looking statements are statements about the future and are inherently uncertain, and actual results of the Company or other future events or conditions may differ materially from those reflected in the forward-looking statements due to a variety of risks, uncertainties and other factors, including those referred to in this short form prospectus, including but not limited to those described in the section titled, "Risk Factors", in this short form prospectus, in any document incorporated by reference herein. These risks include, but are not limited to:

- Additional Financing and Going Concern
- History of Losses
- Strategic Alliances
- Dependence on Key Personnel
- Ability to Attract Qualified Employees to Maintain and Grow Business
- Breach and Loss of Trade Secrets and Other Proprietary Information
- Dependence on Third Parties
- Competition
- Infringement of Intellectual Property Rights
- Intellectual Property
- Trade-marks
- Current Global Financial Conditions
- Conflicts of Interest
- Results of Operations
- Rapidly Changing Markets Make it Difficult to Forecast Future Operating Results

- Uncertain Market/Uncertain Acceptance of the Company's Technology/Target Market
- Technological Advancements
- Insurance and Uninsured Risks
- Ability to License Other Intellectual Property Rights
- Government Regulation
- Profitability
- Changes in Government Policy
- Changes in Accounting and Tax Rules
- Contingent Liabilities
- Uncertainty as to Product Development and Commercialization Milestones
- Product and Services Not Completely Developed
- Manufacturing Risks
- Reliance on External Suppliers and Development Firms
- Product Defect Risks
- Supplier Risks
- Stock Price Volatility
- Future Share Sales
- Limited Operating History
- Fluctuating Financial Results
- Effect of Estimates Regarding Milestones
- Currency Fluctuations
- Liquidity of the Common Shares
- Ability of the Company to Maintain Its Stock Exchange Listings

Forward-looking statements are based on a number of assumptions, which may prove to be incorrect, including but not limited to assumptions about:

- general business and current global economic conditions;
- future success of current research and development activities;
- achieving development and commercial milestones;
- inability to achieve produce cost targets;
- competition;
- changes to tax rates and benefits;
- the availability of financing;
- the Company's and competitors' costs of production and operations;
- the Company's ability to attract and retain skilled employees;
- the Company's ongoing relations with its third-party service providers;
- the design of the SPORT Surgical System and related platforms and equipment;
- the progress and timing of the development of the SPORT Surgical System;
- costs related to the development, completion and potential commercialization of the SPORT Surgical System;
- receipt of all applicable regulatory approvals;
- estimates and projections regarding the robotic surgery equipment industry;
- protection of the Company's intellectual property rights;
- market acceptance of the Company's systems under development;
- the Company's ability to meet the continued listing standards of Nasdaq and the TSX; and
- the type of specialized skill and knowledge required to develop the SPORT Surgical System and the Company's access to such specialized skill and knowledge.

The Company cautions that the foregoing list of important factors and assumptions is not exhaustive. Although the Company has attempted to identify on a reasonable basis important factors and assumptions related to forward-looking statements, there can be no assurance that forward-looking statements will prove to be accurate, as events or circumstances or other factors could cause actual results to differ materially from those estimated or projected and expressed in, or implied by, these forward-looking statements. Other than as specifically required by law, the Company undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made, or to reflect the occurrence of unanticipated events, whether as a result of new information, future events or results or otherwise. Accordingly, readers should not place undue reliance on forward-looking statements.

# CURRENCY PRESENTATION AND EXCHANGE RATE INFORMATION

All currency amounts in this short form prospectus are expressed in United States dollars ("US \$" or \$), unless otherwise indicated. The following table sets out the daily exchange rate of US \$1.00 in terms of Canadian dollars ("CDN \$").

	High (CDN)	Low (CDN)	Average (CDN)
Fiscal years ended			
December 31, 2018	\$1.3642	\$1.2288	\$1.2957
December 31, 2017	\$1.3743	\$1.2128	\$1.2986

On March 15, 2019, the daily exchange rate for US \$ in terms of CDN \$, as quoted by the Bank of Canada, was US \$1.00 = CDN \$1.3342

# DOCUMENTS INCORPORATED BY REFERENCE

Information has been incorporated by reference in this short form prospectus from documents filed with securities commissions or similar regulatory authorities in Canada and with the SEC in the United States. Copies of the documents incorporated by reference herein may be obtained on request without charge from the Chief Financial Officer of the Company at 170 University Avenue, Suite 1000, Toronto, Ontario, M5H 3B3, Telephone: (416) 548-7522. These documents are also available through the internet under the Company's profile on the System for Electronic Document Analysis and Retrieval ("SEDAR") which can be accessed at www.sedar.com. Documents filed with, or furnished to, the SEC are available through EDGAR at www.sec.gov, as well as from commercial document retrieval services. You may also read (and by paying a fee, copy) any document the Company files with or furnishes to the SEC's public reference room in Washington, D.C. (100 F Street N.E., Washington, D.C. 20549). Please call the SEC at 1-800-SEC-0330 for more information on the public reference room. The following documents, filed with the various securities commissions or similar authorities in each of the provinces of British Columbia, Alberta and Ontario, are specifically incorporated by reference into and form an integral part of this short form prospectus:

- 1. the annual information form of the Company dated March 31, 2018 for the financial year ended December 31, 2017 (the "AIF");
- 2. the audited financial statements of the Company as at, and for the financial years ended December 31, 2018 and 2017, together with the notes thereto and the independent auditor's reports thereon (the "Annual Financial Statements");
- the management's discussion and analysis of financial condition and results of operations for the financial year ended December 31, 2018 (the "Annual MD&A");
- 4. the management information circular dated May 11, 2018 relating to Titan's annual and special meeting of shareholders on June 14, 2018;
- 5. the material change report of the Company dated April 2, 2018 in respect of the filing of a preliminary short form prospectus and the announcement of pricing details for a previous public offering (the "April Offering");
- 6. the material change report of the Company dated April 10, 2018 in respect of the filing of a final short form prospectus (the "April Prospectus") and the closing of the April Offering;

- 7. the material change report of the Company dated May 22, 2018 in respect of the closing of the over-allotment option for the April Offering;
- 8. the material change report of the Company dated June 5, 2018 in respect of the Nasdaq Listing (as defined herein) and the Share Consolidation (as defined herein);
- 9. the material change report of the Company dated August 14, 2018 in respect of the filing of a final short form prospectus (the "August Prospectus") and the closing of a previous public offering (the "August Offering");
- 10. the material change report of the Company dated March 6, 2019 in respect of the filing of a preliminary short form prospectus and the announcement of pricing details for the Offering; and
- 11. the investor presentation of the Company filed on SEDAR on March 18, 2019.

Material change reports (other than confidential reports), business acquisition reports, interim financial statements, annual financial statements, annual information forms and all other documents of the type required by National Instrument 44-101 – Short Form Prospectus Distributions to be incorporated by reference in a short form prospectus, filed by the Company with a securities commission or similar regulatory authority in Canada after the date of this short form prospectus and before completion or withdrawal of the Offering, will be deemed to be incorporated by reference into this short form prospectus.

In addition, to the extent that any document or information incorporated by reference into this short form prospectus pursuant to the foregoing paragraph is also included in any report filed with or furnished to the SEC by the Company on Form 6-K or on Form 40-F (or any respective successor form) after the date of this short form prospectus, it shall be deemed to be incorporated by reference as an exhibit to the registration statement of which this short form prospectus forms a part. Further, the Company may incorporate by reference into the registration statement of which this short form prospectus forms a part, any report on Form 6-K furnished to the SEC, including the exhibits thereto, if and to the extent provided in such report.

Upon a new annual information form and annual financial statements being filed by the Company with the applicable Canadian securities commissions or similar regulatory authorities in Canada during the period that this short form prospectus is effective, the previous annual information form, the previous annual financial statements and all interim financial statements, and in each case the accompanying management's discussion and analysis of financial condition and results of operations, and material change reports, filed prior to the commencement of the financial year of the Company in which the new annual information form is filed shall be deemed to no longer be incorporated into the short form prospectus for purposes of offers and sales of Units under this short form prospectus. Upon interim financial statements and the accompanying management's discussion and analysis of financial condition and results of operations being filed by the Company with the applicable Canadian securities commissions or similar regulatory authorities during the period that this short form prospectus is effective, all interim financial statements and the accompanying management's discussion and analysis of financial condition and results of operations filed prior to such new interim financial statements and management's discussion and analysis of financial condition and results of operations shall be deemed to no longer be incorporated into this short form prospectus for purposes of offers and sales of Units under this short form prospectus. In addition, upon a new management information circular for an annual meeting of shareholders being filed by the Company with the applicable Canadian securities commissions or similar regulatory authorities during the period that this short form prospectus is effective, the previous management information circular filed in respect of the prior annual meeting of shareholders shall no longer be deemed to be incorporated into this short form prospectus for offers and sales of Units under this short

Any statement contained in a document incorporated or deemed to be incorporated by reference in this short form prospectus shall be deemed to be modified or superseded for the purposes of this short form prospectus to the extent that a statement contained in this short form prospectus or in any subsequently filed document which also is or is deemed to be incorporated by reference in this short form prospectus modifies or supersedes that statement. The modifying or superseding statement need not state that it has modified or superseded a prior statement or include any other information set forth in the document or statement that it modifies or supersedes. The making of a modifying or superseding statement shall not be deemed an admission for any purpose that the modified or superseded statement, when made, constituted a misrepresentation, an untrue statement of a material fact or an omission to state a material fact that is required to be stated or that is necessary to make a statement not misleading in light of the circumstances in which it was made. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this short form prospectus.

## MARKETING MATERIALS

Any "template version" of any "marketing materials" (as such terms are defined under applicable Canadian securities laws) that are used by the Agent in connection with the Offering are not part of this short form prospectus to the extent that the contents of the template version of the marketing materials have been modified or superseded by a statement contained in this short form prospectus. Any template version of any marketing materials that has been, or will be, filed on SEDAR before the termination of the distribution under the Offering (including any amendments to, or an amended version of, any template version of any marketing materials) is deemed to be incorporated by reference into this short form prospectus.

## DOCUMENTS FILED AS PART OF THE REGISTRATION STATEMENT

The following documents have been or will be filed with the SEC as part of the registration statement of which this short form prospectus forms a part: (i) the documents referred to under the heading "Documents Incorporated by Reference"; (ii) the Agency Agreement; (iii) the consent of BDO Canada; (iv) the consent of Borden Ladner Gervais LLP; (v) the consent of Baker & McKenzie LLP and (vi) the powers of attorney from certain directors and officers of the Company.

# THE BUSINESS

## **Product Development**

The Company's business is focused on research and development through to the commercialization of computer-assisted robotic surgical technologies for application in minimally invasive surgery ("MIS"). The Company is developing the SPORT Surgical System, a single-port robotic surgical system comprised of a surgeon-controlled patient cart that includes a 3D high definition vision system and multi-articulating instruments for performing MIS procedures, and a surgeon workstation that provides the surgeon with an advanced ergonomic interface to the patient cart and a 3D endoscopic view inside the patient's body during MIS procedures. The Company intends to initially pursue focused surgical indications for the SPORT Surgical System, which may include one or more of gynecologic, urologic, colorectal or general abdominal procedures.

Development of the SPORT Surgical System has proceeded with input from surgeons and operating room staff experienced in minimally invasive surgery, consultation with medical technology development firms and input from the Company's Surgeon Advisory Board (the "Surgeon Advisory Board") comprised of surgeons who specialize in MIS. This approach has allowed the Company to design a robotic surgical system that is intended to include the traditional advantages of robotic surgery, including 3D stereoscopic imaging and restoration of instinctive control, as well as new and enhanced features, including an advanced surgeon workstation incorporating a 3D high definition display providing a more ergonomically friendly user interface and a patient cart with enhanced instrument dexterity. Overall, the surgical system is designed to be adapted to the needs of the surgeon, with the intent that the system will appeal to a broader array of surgeons than systems that do not provide such adjustability.

The SPORT Surgical System patient cart is being developed to deliver interactive multi-articulating instruments and a 3D high definition vision system into a patient's abdominal body cavity through a single access port. The design of the patient cart includes an insertion tube of approximately 25 millimeter (mm) diameter. The insertion tube includes an integrated 2D wide-angle camera module that once inserted, provides visualization for optimal positioning of the camera insertion tube by the bedside assistant under the guidance of the surgeon. Once the camera insertion tube is inserted and positioned in the body, a separate steerable, 3D high definition endoscopic camera is configured to deploy into a working configuration wherein the camera module and multi-articulating instruments can be controlled by a surgeon via the workstation. The reusable multi-articulating, snake-like instruments are designed to couple with sterile detachable single patient use robotic end effectors that would provide first use quality in every case and eliminate the reprocessing of the complete instrument. The use of reusable (for a specific number of uses) robotic instruments and single patient use end effectors is intended to minimize the cost per procedure without compromising surgical performance. The patient cart is also designed to include a mast, a boom and wheels for optimal configurability for a variety of surgical indications and the ability to be maneuvered within the operating room, or redeployed within hospitals and surgical centers, where applicable.

As part of the development of the SPORT Surgical System, the Company is developing a robust training curriculum and post-training assessment tools for surgeons and surgical teams. The proposed training curriculum is planned to include cognitive pre-training, psychomotor skills training, surgery simulations, live animal and human cadaver lab training, surgical team training, troubleshooting and an overview of safety. Post-training assessment will include validation of the effectiveness of those assessment tools. On September 18, 2018, the Company announced the successful completion of 14 core surgical skills simulation modules for use with the SPORT Surgical System surgeon workstation. The successful demonstration and delivery of these modules was a significant development in the first phase of the comprehensive surgeon training curriculum that the Company is planning for its SPORT Surgical System.

The Company continuously evaluates its technologies under development for intellectual property protection through a combination of trade secrets and patent application filings. As of March 15, 2019, the Company had ownership of 30 patents and 77 patent applications. The Company has accelerated the filing and prosecution of patents that management believes will validate the novelty of its unique technology, and in turn, support the value of the entire franchise. Early evidence of success with this initiative has been the rapid growth of its patent portfolio from 12 issued patents at December 31, 2016 to 30 issued patents as of March 15, 2019. The Company anticipates further expanding its patent portfolio by filing additional patent applications as it progresses in the development of robotic surgical technologies and potentially, by licensing suitable technologies.

As part of its development and commercialization efforts, the Company has established certain milestones that it uses to assess its progress toward developing commercially viable robotic surgical technologies. These milestones relate to technology and design advancements as well as to targeted dates for preclinical and clinical studies and completion of regulatory submissions. To assess progress, the Company regularly tests and evaluates its technology. If such evaluations indicate technical defects or failure to meet cost or performance goals, the Company's commercialization schedule could be delayed, and potential purchasers of its initial commercial systems may decline to purchase them or may choose to purchase alternative technologies. See "Risk Factors".

# **Development Objectives**

The Company uses a combination of internal resources and external development firms to execute the research, development and commercialization plan for the Company's robotic surgical system.

The results achieved by surgeons in operating prototypes in animal and cadaver studies during 2017 validated the potential for single incision surgeries to be performed with the SPORT Surgical System. However, the studies also confirmed that improvements to the system would be necessary before proceeding toward regulatory clearance and commercialization. Accordingly, product development was accelerated in 2018 in preparation for commercial manufacturing, including hardware and software development at all levels, involving the workstation, patient cart, cameras and light source, instruments, and disposable components that facilitate successful surgery. Product improvements were completed and demonstrated in a capital equipment engineering confidence build of an improved prototype in December 2018. Through correspondence and discussions during 2018, the Company was informed by the Food and Drug Administration of the United States Department of Health and Human Services (the "FDA"), that confirmatory human data will be required for its planned regulatory submission. The performance of human surgeries with the SPORT Surgical System will require an Investigational Device Exemption ("IDE") from the FDA, which must be submitted and approved in advance of any confirmatory human studies. Further, the recruitment of surgeons from multiple hospital sites will be necessary to perform the surgeries. Each of these sites will require approval of their independent Institutional Review Board ("IRB") to approve the studies. During the first three quarters of 2019, the Company plans to pursue the recruitment of surgeons and hospitals for the studies, IDE approval by the FDA, and approvals by the IRB of each hospital, in preparation for the confirmatory human studies planned for completion during the fourth quarter.

A complete estimate of the timing and costs for development milestones beyond 2019 is speculative. The Company estimates that a minimum of US \$64.1 million will be required to fund its operations in 2019. Based on the cash and cash equivalents on hand, including deposits with suppliers as at December 31, 2018, the Company believes that it will need to raise approximately \$45 million to fund its operations in 2019. This includes projected capital resources necessary for the Company to submit its 510(k) application to the FDA and apply for CE marking which indicates that a product for sale within the European Economic Area (EEA) has been assessed to conform with health, safety and environmental protection requirements. If successful with those efforts, the Company expects to proceed with early commercialization activities in the U.S. in 2020. Given the uncertainty of, among other things, product development timelines, regulatory processes and requirements (such as live animal and human cadaver studies and confirmatory human studies), as well as the availability of required capital to fund development and operating costs, actual costs and development times may exceed management's current expectations and an accurate estimate of the future costs of the regulatory phases and development milestones beyond 2019 is not possible at this time. Please see "Risk Factors".

The Company's current plan is to raise sufficient financing and continue the development and commence commercialization of the SPORT Surgical System at estimated incremental costs, and according to the timeline, as set forth in the table below.

## Current Development Plan

The Company anticipates development costs through to the fourth quarter of 2019 to be as set out in the table below.

Milestone Number	Development Milestones	Estimated Cost (in US million \$)	Schedule for Milestone Completion	Comments
Milestone 1	Prototype, test and procure surgeon feedback on revised workstation controls  Complete software and hardware change requirements and finalize computer and software architecture for production systems  Complete revisions to instrument and lens wash system		Q2 2018	Completed
Milestone 2	and demonstrate performance  Complete Camera Insertion Tube (CIT) engineering confidence build based on improved design Complete design of SPORT Surgical System workstation and patient cart for engineering confidence build  Complete and demonstrate full suite of simulation software for beta test		Q3 2018	Completed
Milestone 3	Complete SPORT Surgical System capital equipment engineering confidence build based on improved design		Q4 2018	Completed

Milestone 4	Document results of confidence build unit testing, implement subsystem design improvements and schedule preliminary audit of quality system by European Notified Body	16.0 <sup>(1)</sup>	Q1 2019	To date, approximately US \$12.0 million spent. Estimated cost to complete is approximately US \$4.0 million.  Implementation of the final subsystem design improvements and scheduling of the preliminary audit of the quality system are expected to be completed in March 2019.
Milestone 5	Update system design and related hardware and software documentation  Verify production system operation with clinical experts under rigorous formal (summative) human factors evaluation under simulated robotic manipulation exercises (5)  Implement SPORT Surgical System Design Freeze(5)  Initiate preclinical live animal (swine) and cadaver studies according to final protocols for FDA submittal (5)  Submit Investigational Device Exemption (IDE) application to FDA	16.9 <sup>(2)</sup>	Q2 2019	
	Submit draft protocols to FDA in Q-submission(s) for comment			Completed
Milestone 6	Complete and document preclinical live animal (swine) and cadaver surgery studies according to final protocols for FDA submittal  Obtain ISO 13485 Certification  Receive IDE approval from FDA	16.1(3)	Q3 2019	
Milestone 7	Complete and document human confirmatory studies under IDE protocols for FDA submittal  Submit Technical File to European Notified Body for review for CE Mark  Submit 510(k) application to FDA	15.1(4)	Q4 2019	
	TOTAL	64.1		

# **Notes:**

<sup>(1)</sup> Includes research and development costs estimated at approximately US \$14.6 million, and general and administrative costs estimated at approximately US \$1.4 million. At the time of the filing of the August Prospectus, the costs associated with Milestone 4 were estimated at US \$14.9 million, based on then current information from internal sources as well as the Company's suppliers and product development partners. As product development continued during the six month period that followed, more current cost information became available to the Company, based on the components, processes and labor associated with the development of the improved robotic system produced in the capital equipment engineering confidence build (Milestone 3). This new information resulted in an increase in estimated costs for completing Milestone 4 by US \$1.1 million, to US \$16.0 million. There has been no change in the use of proceeds, and the Company is on schedule to complete Milestone 4 in the first quarter of 2019.

- (2) Includes research and development costs estimated at approximately US \$15.5 million, and general and administrative costs estimated at approximately US \$1.4 million. As of the date of this short form prospectus, approximately US \$4 million remains outstanding of the total estimated cost to complete Milestone 4.
- (3) Includes research and development costs estimated at approximately US \$14.7 million, and general and administrative costs estimated at approximately US \$1.4 million
- (4) Includes research and development costs estimated at approximately US \$13.7 million, and general and administrative costs estimated at approximately US \$1.4 million
- (5) These development milestones were previously included in Milestone 6 in the August Prospectus and scheduled for completion in Q3-Q4 2019. The schedule for completion of these development milestones has been revised to Q2 2019 and they have added to Milestone 5 as a result.

Milestone 5 has been expanded in this short form prospectus to include additional activities that have been moved up in time, compared to the August Prospectus. During 2018, the Company submitted draft protocols to the FDA in Q-submissions for comment well ahead of its milestone scheduled for the second quarter of 2019 and received responses which clarified the regulatory pathway. In addition, significant product development progress was achieved in 2018, and the capital equipment engineering confidence build was completed on schedule, by year-end 2018. As a result, the Company has moved up three milestone activities from Milestone 6, as set forth in the August Prospectus, to Milestone 5 in this short form prospectus. These activities include verification of production system operation with clinical experts under rigorous formal (summative) human factors evaluation under simulated robotic manipulation exercises, initiation of SPORT Surgical System design freeze, and initiation of preclinical live animal (swine) and cadaver studies according to final protocols for FDA submittal. In addition, through its correspondence with the FDA, the Company has clarified the requirement to submit an application for an IDE with the FDA and receive approval prior to proceeding with human confirmatory studies. This filing of the IDE application has now been added to Milestone 5 in this short form prospectus. Accordingly, the estimated cost of Milestone 5 has been adjusted from US \$12.3 million, as described in the August Prospectus, to US \$16.9 million in this short form prospectus.

Upon completion of the development of the SPORT Surgical System and following receipt of regulatory approval in the United States, the Company intends to utilize a direct sales force to initiate marketing the SPORT Surgical System to hospitals and ambulatory surgery centers.

Due to the nature of technology research and development, there is no assurance that these objectives will be achieved, and there can be no assurance with respect to the time or resources that may be required. The Company expects that additional specific milestones could be identified as the development of its SPORT Surgical System progresses, or existing milestones, budgets and the schedule for completion of each milestone may change depending on a number of factors including the results of the Company's development program, clarification of or changes to regulatory requirements, the availability of financing and the ability of development firms engaged by the Company to complete work assigned to them. The total costs to complete the development of the Company's SPORT Surgical System as referenced above are only an estimate based on current information available to the Company and cannot yet be determined with a high degree of certainty, and the costs may be substantially higher than estimated. Please see "Special Note Regarding Forward-Looking Statements" and "Risk Factors".

Please also refer to the risk factors set forth starting on page 16 of the AIF.

## **Market Opportunity**

The Company's robotic surgical system is being designed to address the growing multi-billion-dollar, global robotically-assisted surgical devices market.

The size of the global market for*robotically-assisted surgical devices* is projected by Life Science Intelligence Inc.'s Meddevicetracker to be \$5.3 billion by 2021, based on an October 2017 report titled "Global Robotically-Assisted Surgical Devices Market", number MDT 17015 (the "Meddevicetracker Report"). The Meddevicetracker Report focuses only on *robotically-assisted surgical devices* and uses actual 2016 data of \$3.04 billion in global revenue as the baseline. The Meddevicetracker Report then applies a compound annual growth rate of 11.7% to project global revenue for the next five years.

The above-referenced market research report is subjective and speak as of its original publication dates, (and not as of the date of this short form prospectus), and the opinions and market data expressed in this report is subject to change without notice. Management believes that this source is generally reliable, but the accuracy and completeness of this information is not guaranteed. The information presented in the report noted above and any underlying assumptions for the markets estimate and the projections contained therein have not been independently verified.

According to a press release issued by robotic surgery industry leader Intuitive Surgical on January 9, 2019, over 1,000,000 surgical procedures were performed with the da Vinci Surgical System in 2018, an increase of approximately 18% compared with approximately 877,000 procedures performed in 2017, with further procedure growth of 13% to 17% projected for 2019. Intuitive Surgical reported that it shipped 926 *da Vinci* Surgical Systems in 2018, compared with 684 systems in 2017. The information set forth in the news release of Intuitive Surgical noted above has not been independently verified by the Company.

# Robotic Surgery

Surgery has traditionally been performed through large, open incisions. Over the past 25 years, minimally invasive techniques and devices have been employed to minimize the size of incisions, reduce trauma to patients, and in turn, reduce associated pain, accelerate healing, shorten recovery times and produce smaller scars. Some of these benefits, such as shorter recovery times and reduced pain leading to shorter hospital stays, are directly associated with lower costs of care. However, MIS requires special tools to operate through small ports in the body, and advanced training for surgeons to manipulate those tools while viewing a two-dimensional image of the patient's internal anatomy on a monitor. As a result, consistent outcomes improvements are demonstrated by the most skilled and experienced surgeons, and less reliably by those less experienced. For these reasons, the acceptance of MIS has not broadly increased in more complex surgeries.

The shortcomings of both open surgery and MIS have led to the introduction of robotics within the surgical environment. Robotic or computer-assisted surgical technologies represent the next generation in the evolution of advanced surgical care. The objectives of robotic systems are to provide surgeons with tools to allow complex procedures to be performed repeatedly with greater precision and dexterity, while offering improved vision and control. The use of robotics is intended to empower surgeons to employ improved techniques for MIS and assist in reducing the risks associated with complex MIS surgeries.

## Market Acceptance

To date, robotic surgical technologies have been employed in urology, gynecology, colon and rectal surgery, cardiothoracic surgery, general surgery, head and neck surgery, orthopedic surgery, neurosurgery, catheter-based interventional cardiology and radiology, and endoscopic, diagnostic and therapeutic bronchoscopic procedures.

The success of robotic technologies in these applications has led to the growing adoption and commercialization of these technologies in the medical industry. Although robotic surgical procedures have been gaining substantial acceptance, the industry is still in its infancy. The available technology is evolving along with advancements in imaging and computer-machine controls to overcome technical challenges. Current objectives include overcoming the limitations of multi-port access, limited dexterity and visualization.

# Competitive Conditions

The entrenched industry leader within the robotic surgical market is Intuitive Surgical, Inc., manufacturer of several models of the da Vinci® Surgical System. Having entered the market in 1999, Intuitive Surgical's product line now includes multiple generations of da Vinci multi-port robotic systems, as well as a new single-port da Vinci SP® model cleared by the FDA for urologic applications, with customer shipments that began in the third quarter of 2018. Specifically related to abdominal surgery, a new competitor in multi-port robotic surgery recently emerged, with TransEnterix Inc. receiving FDA clearance for its Senhance™ Surgical Robotic System in October of 2017. In addition, Medrobotics Corporation has received FDA clearance for abdominal indications for its Flex® Robotic System with manual endoscopic instruments, which had previously been cleared for natural orifice (ENT) surgery. On February 13, 2019, Ethicon, Inc. (a division of Johnson & Johnson) announced that it had entered into a definitive agreement to acquire Auris Health, Inc., the maker of the Monarch™ surgical platform, for approximately US \$5.75 billion (including contingent payments). Further, there are a number of companies reported to be developing robotically-assisted surgical systems, including Medtronic, Inc., Verb Surgical Inc. (a collaboration between Alphabet Inc.'s Verily division (formerly, Google Life Sciences) and Ethicon, Inc., CMR Surgical Ltd. from the United Kingdom (Versius® surgical robotic system) and South Korea's Meere Company Inc. (Eterne robotic system).

Any company with substantial experience in robotics or complex medical devices could potentially expand into the field of surgical robotics and become a future competitor.

# Regulation

United States Regulatory Process

In the United States, the Company's surgical system will be subject to regulation by the FDA. Management expects that under the FDA guidelines, the surgical system will be classified as a Class II medical device. Class II devices are those which are subject to the general controls and require premarket demonstration of adherence to certain performance standards or other special controls, as specified by the FDA, and clearance by the FDA. Premarket review and clearance by the FDA for these devices is accomplished through the 510(k) premarket notification process. For most Class II devices, the manufacturer must submit to the FDA a premarket notification submission, demonstrating that the device is "substantially equivalent" in intended use and technology to a "predicate device" that is either:

- (1) a device that has grandfather marketing status because it was legally marketed prior to May 28, 1976, the date upon which the Medical Device Amendments of 1976 were enacted, or
- (2) a Class I or II device that has been cleared through the 510(k) process.

The FDA may require further information, including clinical data, to make a determination regarding substantial equivalence. If the FDA determines that the device, or its intended use, is not "substantially equivalent" (as such term is defined by the FDA), the FDA may place the device, or the particular use of the device, into Class III, and the device sponsor must then fulfill much more rigorous pre-marketing requirements.

In preparation for its planned FDA 510(k) application, the Company has already filed several Q-Submissions with the FDA to clarify in detail the preclinical studies and confirmatory human data required to support its submission. The associated Q-Submission milestone was achieved in advance of the projected completion in 2019. The Company plans to design and execute its studies based on the FDA's responses, with the intent of filing a fully compliant 510(k) application by year-end.

Even after a device receives 510(k) clearance, any modification that could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, would require a new 510(k) clearance or could require a pre-market approval application. The FDA requires each manufacturer to make this determination in the first instance, but the FDA can review any such decision. If the FDA disagrees with a manufacturer's decision not to seek a new 510(k) clearance, the agency may retroactively require the manufacturer to seek 510(k) clearance or pre-market approval. The FDA may also require the manufacturer to cease marketing and/or recall the modified device until 510(k) clearance or pre-market approval is obtained.

European Union and Canada Regulatory Process

Medical devices in the European Union ("EU") are regulated under EU Council Directive 93/42/EEC as amended by 2007/47/EC, also referred to as Medical Device Directive or MDD, and must bear the CE Mark prior to being placed on the market. In order to affix the CE Mark on products, a recognized European Notified Body must certify a manufacturer's quality management system for compliance with international and European requirements under the ISO 13485:2003 standard. Any modifications of existing products or development of new products in the future will require permission to affix the CE Mark to such products. The Company has initiated communication with a European Notified Body to arrange for ISO 13485:2003 certification of its quality system in advance of expectations of submitting for the CE Mark by year-end 2019.

In order to commercialize products in Canada, regulatory approval from Health Canada (Therapeutic Products Directorate, Medical Devices Bureau) is required. Medical device licence applications must contain a valid ISO 13485:2003 certificate issued by a Health Canada recognized registrar under the Canadian Medical Devices Conformity Assessment System (CMDCAS). Evaluation of product safety and effectiveness is completed by Health Canada.

#### Specialized Skill and Knowledge

The research and development of the Company's surgical system requires specialized skill and knowledge. The Company believes the required skill and knowledge to carry out the current stage of research and development is available to the Company, through its current officers, employees and external medical technology development firms. The Company will continue to assess its requirements and recruit and engage required qualified personnel and development firms as needed, subject to budget limitations. If the final research and development stage is successfully completed and the clinical-grade SPORT Surgical System is developed, it is believed that the materials and parts necessary for the manufacture of the product will be available in the marketplace. However, there is no assurance in this regard as the research and development program may, in the future, reveal requirements for new materials and parts that have not been identified to date.

## **Intellectual Property Protection**

The Company continuously evaluates its technologies under development for intellectual property protection. In accordance with industry practice, the Company's proprietary rights are currently protected through a combination of copyright, trade-mark, patents, trade secret laws and contractual provisions.

Patent applications are filed in various jurisdictions internationally, which are selectively chosen having regard to the likely value and enforceability of intellectual property rights in those jurisdictions, and to strategically reflect the Company's anticipated principal markets. Patents provide the Company with a potential right to exclude others from incorporating the Company's technical innovations into their own products and processes. Where appropriate, the Company may license third party technologies to provide the Company with the flexibility to adopt preferred technologies.

As of March 15, 2019, the Company has ownership of 30 patents and 77 patent applications. The Company anticipates expanding its intellectual property portfolio by filing additional patent applications as it progresses in the development of robotic surgical technologies, acquiring and/or by licensing suitable technologies.

The scope of protection obtained, if any, from the Company's current or future patent applications may not be known for several years. Moreover, there is no assurance that any patents will be issued with respect to any such patent applications, and if patents are issued, they may not provide the Company with the expected competitive advantages, or they may not be issued in a manner that gives the Company the protection that it seeks, or they may be successfully challenged by third parties.

The Company also seeks to avoid disclosure of its intellectual property and proprietary information by requiring employees and consultants to execute non-disclosure and assignment of intellectual property agreements. Such agreements also require the Company's employees and consultants to assign to the Company all intellectual property developed in the course of their employment or engagement. The Company also utilizes non-disclosure agreements to govern interaction with business partners and prospective business partners and other relationships where disclosure of proprietary information may be necessary, and the Company takes measures to carefully protect its intellectual property rights in its supplier agreements with external development firms.

While the Company believes that its technology being developed or utilized does not infringe upon the proprietary rights of third parties, its commercial success depends, in part, upon the Company not infringing intellectual property rights of others. A number of medical device and robotic surgery companies and other third parties have been issued patents or may have filed patent applications or may obtain additional patents and proprietary rights for technologies similar to those being developed or utilized by the Company. Accordingly, there may exist third party patents, patent applications or other proprietary rights that require the Company to alter its technology, obtain licenses or cease certain activities. The Company may become subject to claims by third parties that its technology infringes their intellectual property rights due to the growth of products in its target markets, the overlap in functionality of those products and the prevalence of products. The Company may become subject to these claims either directly or through indemnities against these claims that it may provide to end users, manufacturer's representatives, distributors, value added resellers, system integrators and original equipment manufacturers.

Although the Company has registrations and pending applications for certain trade-marks, it may be unable to obtain or maintain trade-mark registrations for the marks and names it uses in one or more countries. It is also possible that the use of "SPORT", "SPORT Surgical System", "Titan", "Titan Medical" or variations thereof may infringe or contravene the rights, including trade-mark rights, of other parties in one or more countries. In the event of actual or alleged infringement or contravention of rights, the Company may be forced to cease using these marks and names.

## **Operations**

The Company develops its core technologies through a combination of in-house personnel and selected external engineering and medical technology development and manufacturing firms. Certain components of the Company's robotic surgical system are being developed to the Company's specifications by various third party suppliers, medical technology development and manufacturing firms through purchase orders and it does not have long-term contracts with any third parties.

The Company maintains its head office at subleased premises in Toronto, Ontario.

## **Employees**

As of March 15, 2019, the Company had a total of nine full-time employees and one full-time consultant.

## RECENT DEVELOPMENTS

# Going Concern

As at December 31, 2018, the Company has shareholders' deficiency of \$172,937,694 and current losses of \$22,639,272. The Company currently does not generate any revenue (other than interest income on its cash balances) and accordingly it is primarily dependent upon equity financing for any additional funding required for development and operating expenses. The Company expects that approximately US \$45 million in incremental funding is needed, for the next 12 months to maintain its currently anticipated pace of development. If additional funding is not available, the pace of the Company's product development plan may be reduced. These conditions indicate the existence of a material uncertainty that may cast significant doubt on the ability of the Company to continue as a going concern if additional funding is not secured. However, based on internal forecasts, Management believes that the Company has sufficient funds to meet its obligations under a reduced development plan, if necessary, for the ensuing twelve months.

Evolution of Costs and Timelines

The results achieved by surgeons in operating prototypes in animal and cadaver studies during 2017 and 2018 validated the potential for single incision surgeries to be performed with the SPORT Surgical System. However, the studies also confirmed that improvements to the system would be necessary before proceeding toward regulatory clearance and commercialization. Accordingly, product development was accelerated in 2018 in preparation for commercial manufacturing, including hardware and software development at all levels, involving the workstation, patient cart, cameras and light source, instruments, and disposable components that facilitate successful surgery. Product improvements were completed and implemented in a capital equipment engineering confidence build of an improved prototype in December of 2018 and are expected to be followed by system performance evaluation in early 2019.

Additional product development, including software integration, will be completed before design freeze and proceeding with summative evaluation usability tests with the final product and validation studies required for supporting regulatory filings. Based on the scope of product development ahead, the Company expects these tests and studies to take place in 2019, with the system in its final configuration and with training programs in place for new surgeon users.

During 2018, the Company confirmed with the Food and Drug Administration of the United States Department of Health and Human Services (the "FDA"), that confirmatory human data will be required for its planned regulatory submission. See "The Business – Regulation".

The amounts and timing of the Company's actual expenditures will depend upon numerous factors, including the status of its development and commercialization efforts, the costs associated with the preclinical and IDE studies, and the amount of capital raised through equity financings and warrant and option exercises.

The August Prospectus set out the anticipated use of certain proceeds raised pursuant to the Company's April Prospectus in the third and fourth quarter of 2018. The Company confirms that the actual use of such proceeds was in accordance with the anticipated use set out in the August Prospectus.

The Company also continues to study the evolving competitive surgical products patent landscape, in order to ensure that its product would not likely infringe the intellectual property of others. Proactively, the Company also seeks to establish a robust patent portfolio that includes coverage of innovative aspects of the company's technology. Protection of the Company's novel technology is critical for preserving the value of its products and may significantly reduce the ability of competitors to copy its designs. The Company has invested significantly in the timely filing and prosecution of patent applications that it believes will validate the novelty of the Company's unique technology, and in turn, will support the value of the entire franchise, on behalf of its stockholders.

Early Results of First Preclinical Studies

The Company has selected three Centers of Excellence (strategic facilities) for preclinical studies in the U.S. and Europe, which are:

- Florida Hospital Nicholson Center in Celebration, Florida;
- Columbia University Medical Center in New York, New York; and
- Institut Hospitalo-Universitaire de Strasbourg ("IHU Strasbourg") in Strasbourg, France.

Ahead of its published milestone, on September 25, 2017, the Company announced the completion of the world's first gynecologic, colorectal and urologic single port robotic procedures using its advanced prototype SPORT Surgical System at the Florida Hospital Nicholson Center in Celebration, Florida. Since that time, the Company has announced that surgeons have completed critical surgical tasks integral to gynecologic procedures using advanced prototypes of the SPORT Surgical System at Columbia University Medical Center's surgical simulation center in New York, New York and at the Institute of Image-Guided Surgery at IHU Strasbourg.

To date, 12 experienced robotic surgeons from three continents have performed 43 live animal studies and two human cadaver studies as set out below. The studies performed include a broad array of procedures commonly performed by gynecologic, urologic, colorectal, bariatric, and general surgeons. The surgeons who performed these studies have prepared and submitted related abstracts for peer review, and have presented at clinical education meetings.

- Gynecologic and Gynecologic Oncology (8 procedures at Columbia University and Florida Hospital):
  - o Radical Hysterectomy with Bilateral Salpingo Oophorectomy and Bilateral Pelvic / Para-Aortic Node Dissection
  - o Simple Hysterectomy with Bilateral Salpingo Oophorectomy and Bilateral Pelvic Node Dissection
  - o Simple Hysterectomy with Bilateral Salpingo Oophorectomy
- Urology (19 procedures at IHU Strasbourg and Florida Hospital):
  - o Hemi-Nephrectomy and Partial Nephrectomy
  - o Prostatectomy (Human Cadaver)
  - Pyeloplasty
  - o Ureteral-Bladder Anastomosis
- General Surgery (14 procedures at IHU Strasbourg and Florida Hospital):
  - o Cholecystectomy (1 Human Cadaver, 5 Live Porcine)
  - o Nissen Fundoplication (1 Human Cadaver, 3 Live Porcine)
  - o Esophagectomy (Human Cadaver)
  - o Gastrectomy
  - Splenectomy
- Colorectal (4 procedures at Florida Hospital):
  - Colectomy
  - o Low Anterior Resection

## Stock Options

On February 12, 2019, the Board of Directors passed a resolution to seek approval from shareholders of the Company at the next annual and special meeting of shareholders (the "AGM") in order to reprice all outstanding stock options granted to current officers and employees of the Company so that the exercise price would become the greater of: (i) the 5-day volume weighted average price of the Common Shares on the day prior to the date of the AGM and (ii) the Offering Price.

# PRICE RANGE AND TRADING VOLUME OF LISTED SECURITIES

The Common Shares are listed for trading in Canada on the TSX under the symbol "TMD". The Common Shares are also traded on the Nasdaq in the United States under the symbol "TMDI". In addition, the Company has four classes of warrants which were, over the last 12 months, listed on the TSX under the symbols TMD.WT.F, TMD.WT.G, TMD.WT.H and TMD.WT.I.

The Company consolidated its outstanding Common Shares on the basis of one post-consolidation Common Share for 30 pre-consolidation Common Shares (the "Share Consolidation") effective June 19, 2018. Details regarding price and volume before this date are on a pre-Share Consolidation basis and details regarding price and volume after this date are on a post-Share Consolidation basis.

# Summary of Monthly Trading - Common Shares

The following table shows the high and low trading prices and the aggregate volume of Common Shares traded on the TSX (as reported by the TSX) and Nasdaq (as reported by Nasdaq) for each of the last 12 months (since the commencement of trading in the case of Nasdaq).

		TSX		Nasdaq		
Month	High (CDN \$)	Low (CDN \$)	Volume	High (US \$)	Low (US \$)	Volume
<u>2018</u>						
March	0.415	0.23	30,997,840	-	-	-
April	0.285	0.225	7,009,860	-	-	-
May	0.27	0.225	3,172,320	-	-	-
June <sup>(1)</sup>	9.60	0.23	7,437,840	7.75	5.50	434,702
July	7.79	3.67	797,520	7.00	2.82	2,445,234
August	3.98	2.22	1,375,150	4.24	1.70	5,182,049
September	3.05	2.40	570,750	2.37	1.8542	3,484,916
October	2.95	2.47	279,330	2.2713	1.90	1,397,121
November	3.00	2.30	182,390	2.03	1.80	1,018,750
December	2.59	1.44	128,319	1.98	1.05	1,768,093
<u>2019</u>						
January	6.20	1.62	4,738,600	4.65	1.1942	15,319,904
February	6.17	4.37	3,060,410	4.65	3.341	8,828,793
March 1-15	5.77	3.99	2,547,430	4.50	2.99	4,204,205

# **Notes:**

(1) The Common Shares commenced trading on Nasdaq on June 27, 2018.

# **Summary of Monthly Trading – November 2020 Warrants**

On November 16, 2015, the Company issued 7,012,195 warrants expiring November 16, 2020, each exercisable for 0.03333 Common Shares at an exercise price of CDN \$1.60, as adjusted in accordance with the Share Consolidation (the "November 2020 Warrants"). The November 2020 Warrants are listed for trading on the TSX under the symbol "TMD.WT.F". The following table shows the high and low trading prices and the volume of the November 2020 Warrants traded on the TSX for each of the last 12 months (as reported by the TSX).

Month	High (CDN \$)	Low (CDN \$)	Volume
<u>2018</u>			
March	0.10	0.03	331,333
April	0.07	0.02	54,300
May	0.05	0.02	15,000
June	0.05	0.015	179,350
July	0.025	0.015	255,350
August	0.025	0.025	5,000
September	0.01	0.01	2,000
October	0.02	0.01	43,000
November	0.02	0.015	37,000
December	0.01	0.01	1,000
<u>2019</u>			
January	0.015	0.015	71,500
February	0.02	0.015	51,602
March 1-15	0.02	0.01	17,500

# Summary of Monthly Trading - February 2021 Warrants

Titan issued 11,670,818 warrants on February 12, 2016 and 1,746,789 warrants on February 23, 2016, each exercisable for 0.03333 Common Shares at an exercise price of CDN \$1.00 per warrant, as adjusted in accordance with the Share Consolidation, until February 12, 2021 (the "February 2021 Warrants"). The February 2021 Warrants are listed for trading on the TSX under the symbol "TMD.WT.G". The following table shows the high and low trading prices and the volume of the February 2021 Warrants traded on the TSX for each of the last 12 months (as reported by the TSX).

Month	High (CDN \$)	Low (CDN \$)	Volume
<u>2018</u>			
March	0.165	0.07	212,222
April	0.08	0.04	173,650
May	0.05	0.045	102,500
June	0.06	0.04	85,000
July	0.055	0.02	242,800
August	0.045	0.01	83,500
September	-	-	-
October	0.02	0.005	232,500
November	0.025	0.005	374,000
December	-	-	-
<u>2019</u>			
January	-	-	-
February	0.07	0.045	187,150
March 1-15	0.065	0.03	52,600

# **Summary of Monthly Trading - March 2021 Warrants**

Titan issued 15,054,940 warrants on March 31, 2016 and 2,258,241 warrants on April 14, 2016, each exercisable for 0.03333 Common Shares at an exercise price of CDN \$1.20 per warrant, as adjusted in accordance with the Share Consolidation, until March 31, 2021 (the "March 2021 Warrants"). The March 2021 Warrants are listed for trading on the TSX under the symbol "TMD.WT.H". The following table shows the high and low trading prices and the volume of the March 2021 Warrants traded on the TSX for each of the last 12 months (as reported by the TSX).

Month	High (CDN \$)	Low (CDN \$)	Volume
<u>2018</u>			
March	0.11	0.05	173,000
April	0.07	0.035	42,000
May	0.07	0.025	45,000
June	0.065	0.025	67,860
July	0.04	0.015	172,140
August	0.035	0.015	191,200
September	0.025	0.02	65,000
October	0.015	0.005	438,700
November	0.025	0.01	186,000
December	-	-	-
<u>2019</u>			
January	0.045	0.015	176,000
February	0.04	0.02	389,000
March 1-15	0.045	0.02	5,000

# Summary of Monthly Trading - September 2021 Warrants

Titan issued 17,083,333 warrants on September 20, 2016 and 2,030,000 warrants on October 27, 2016, each exercisable for one Common Share at an exercise price of CDN \$0.75 per warrant, subject to adjustment in accordance with the Share Consolidation, until September 20, 2021 and October 27, 2021 respectively (the "September 2021 Warrants"). The September 2021 Warrants are listed for trading on the TSX under the symbol "TMD.WT.I". The following table shows the high and low trading prices and the volume of the September 2021 Warrants traded on the TSX for each of the last 12 months (as reported by the TSX).

Month	High (CDN \$)	Low (CDN \$)	Volume
<u>2018</u>			
March	0.195	0.10	239,900
April	0.10	0.10	500
May	0.10	0.075	13,400
June	0.105	0.07	142,100
July	0.11	0.06	64,800
August	0.07	0.03	14,920
September	0.03	0.02	170,450
October	0.08	0.04	113,460
November	0.075	0.025	19,000
December	0.02	0.02	1,000
<u>2019</u>			
January	0.17	0.05	381,890
February	0.155	0.075	748,420
March 1-15	0.14	0.095	168,600

# PRIOR SALES

The following tables summarize the Common Shares or securities convertible into, or exercisable to acquire, Common Shares that have been issued by the Company during the 12 months prior to the date of this short form prospectus.

The Share Consolidation was effective June 19, 2018. Details regarding price and number of securities granted and issued before this date are on a post-Share Consolidation basis.

## Common Shares issued:

<u>Date</u>	Price Per Common Share	<b>Number of Common Shares Issued</b>
March 2, 2018	CDN \$6.00	333(2)
March 7, 2018	CDN \$6.00	332(2)
March 7, 2018	CDN \$8.10	2,500(1)
March 29, 2018	CDN \$6.00	332(2)
April 10, 2018	CDN \$9.00	1,126,664 <sup>(3)</sup>
May 10, 2018	CDN \$9.00	168,888(3)
August 10, 2018	USD \$2.50	7,679,574 <sup>(4)</sup>
January 23, 2019	USD \$3.20	68,314(5)
January 24, 2019	USD \$3.20	248,574(5)
January 25, 2019	USD \$3.20	30,000(5)
January 28, 2019	USD \$3.20	71,700 <sup>(5)</sup>
January 29, 2019	USD \$3.20	20,500(5)
February 1, 2019	USD \$3.20	25,000(5)
February 4, 2019	USD \$3.20	151,516 <sup>(5)</sup>
February 8, 2019	USD \$3.20	4,000(5)
February 19, 2019	USD \$3.20	139,800(5)
February 20, 2019	USD \$3.20	35,000(5)
March 4, 2019	USD \$3.20	75,000 (5)
March 5, 2019	USD \$3.20	49,100 (5)
March 7, 2019	USD \$3.20	100,000 (5)

- (1) Issued pursuant to a consulting agreement.
- (2) Issued pursuant to the exercise of warrants originally issued June 29, 2017.
- (3) Issued pursuant to a short form prospectus of the Company dated April 3, 2018.
- (4) Issued pursuant to a short form prospectus of the Company dated August 7, 2018
- (5) Issued pursuant to the exercise of warrants originally issued August 10, 2018

## Warrants issued:

		Number of Common Shares
<u>Date</u>	Exercise Price per Common Share	exercisable for
April 10, 2018	CDN \$10.50	1,126,665(1)
May 10, 2018	CDN \$10.50	168,889(1)
August 10, 2018	USD \$3.20	7.679.574(2)

## **Notes:**

- (1) Issued pursuant to a short form prospectus of the Company dated April 3, 2018.
- (2) Issued pursuant to a short form prospectus of the Company dated August 7, 2018.

# Stock options issued:

<u>Date</u>	Exercise Price	Number of Stock Options Granted
July 6, 2018	CDN \$7.49	5,590
July 6, 2018	CDN \$9.00	11,481
August, 29, 2018	CDN \$3.28	31,498
December 18, 2018	USD \$1.55	50,349
February 15, 2019	USD \$3.72	40,000

# DESCRIPTION OF OFFERED SECURITIES

The Offering consists of a minimum of 5,882,353 Units and a maximum of 7,352,941 Units (assuming no exercise of Over-Allotment Option), each Unit consisting of one Offered Share and one Warrant, each Warrant entitling the holder thereof to purchase one Warrant Share at an exercise price of US \$4.00 per Warrant Share, subject to adjustment, at any time until 5:00 p.m. (Toronto time) on the date that is 60 months after the first Closing Date. The Units will immediately separate into Offered Shares and Warrants upon issuance. This short form prospectus also qualifies the distribution of Warrant Shares and Broker Warrant Shares.

## Offered Shares

The authorized capital of the Company consists of an unlimited number of Common Shares.

The holders of Common Shares (including Offered Shares, Warrant Shares and Broker Warrant Shares) are entitled to receive notice of and to attend all annual and special meetings of the Company's shareholders and to one vote in respect of each Common Share held at the record date for each such meeting. The holders of Common Shares are entitled, at the discretion of the Board of Directors, to receive out of any or all of the Company's profits or surplus properly available for the payment of dividends, any dividend declared by the Board of Directors and payable by the Company on the Common Shares. The holders of the Common Shares will participate pro rata in any distribution of the assets of the Company upon liquidation, dissolution or winding-up or other distribution of the assets of the Company. Such participation will be subject to the rights, privileges, restrictions and conditions attached to any of the Company's securities issued and outstanding at such time ranking in priority to the Common Shares upon the liquidation, dissolution or winding-up of the Company. Common Shares are issued only as fully paid and are non-assessable. Common Shares will only be issued through the book-based system administered by CDS in Canada and by DTC in the United States, except in limited circumstances. See "Description of Offered Securities - Book-Based System".

As at March 15, 2019, the Company had 22,694,355 Common Shares issued and outstanding. As at March 15, 2019 after giving effect to the Minimum Offering, the Company would have 28,576,708 Common Shares issued and outstanding (without giving effect to the Over-Allotment Option). As at March 15, 2019, after giving effect to the Maximum Offering, the Company would have 30,047,296 Common Shares issued and outstanding (31,150,237 Common Shares if the Over-Allotment Option is exercised in full for Over-Allotment Units, assuming no further exercises or issuances of convertible securities).

#### Warrants

The Warrants will be governed by the terms of a warrant indenture (the "Warrant Indenture") to be entered into between the Company and Computershare Trust Company of Canada, as warrant agent thereunder (the "Warrant Agent"). The Company will appoint the principal transfer offices of the Warrant Agent in Toronto, Ontario as the location at which Warrants may be surrendered for exercise or transfer. The following summary of certain provisions of the Warrant Indenture contains all of the material attributes and characteristics of the Warrants but does not purport to be complete and is qualified in its entirety by reference to the provisions of the Warrant Indenture.

Each Warrant will entitle the holder to purchase one Warrant Share at an exercise price of US \$4.00 per Warrant Share, subject to adjustment, at any time until 5:00 p.m. (Toronto time) on the Warrant Expiry Time.

The exercise price for the Warrants will be payable in U.S. dollars.

The Warrant Indenture will provide for adjustment in the number of Warrant Shares issuable upon the exercise of the Warrants and/or the exercise price per Warrant Share upon the occurrence of certain events, including:

- (i) the issuance of Common Shares or securities exchangeable for or convertible into Common Shares to holders of all or substantially all of the Company's Common Shares by way of stock dividend or other distribution (other than a "dividend paid in the ordinary course", as defined in the Warrant Indenture, or a distribution of Common Shares upon the exercise of the Warrants or pursuant to the exercise of director, officer or employee stock options granted under the Company's stock option plan);
- (ii) the subdivision, redivision or change of the Common Shares into a greater number of shares;

- (iii) the reduction, combination or consolidation of the Common Shares into a lesser number of shares;
- (iv) the fixing of a record date for the issue of rights, options or warrants to all or substantially all of the holders of the Common Shares under which such holders are entitled, during a period expiring not more than 45 days after the record date for such issuance, to subscribe for or purchase Common Shares, or securities exchangeable for or convertible into Common Shares, at a price per share to the holder (or having an exchange or conversion price per share) of less than 95% of the "current market price", as defined in the Warrant Indenture, for the Common Shares on such record date; and
- (v) the issuance or distribution to all or substantially all of the holders of the securities of the Company including shares, rights, options or warrants to acquire shares of any class or securities exchangeable or convertible into any such shares or cash, property or assets and including evidences of indebtedness, or any cash, property or other assets.

The Warrant Indenture will also provide for adjustment in the class and/or number of securities issuable upon the exercise of the Warrants and/or exercise price per security in the event of the following additional events: (i) reclassifications of the Common Shares; (ii) consolidations, amalgamations, plans of arrangement or mergers of the Company with or into another entity (other than consolidations, amalgamations, plans of arrangement or mergers which do not result in any reclassification of the Common Shares or a change or exchange of the Common Shares into other shares); or (iii) the transfer of the undertaking or assets of the Company as an entirety or substantially as an entirety to another Company or other entity.

The Warrant Indenture will also provide for ratchet anti-dilution protection upon the issuance of Common Shares, securities convertible into Common Shares or certain other issuances at a price below the then-existing exercise price of the Warrants, with certain exceptions and subject to a floor of US \$3.95, being the five-day volume weighted average price of Common Shares on the TSX on March 5, 2019.

No adjustment in the exercise price or the number of Warrant Shares purchasable upon the exercise of the Warrants will be required to be made unless the cumulative effect of such adjustment or adjustments would change the exercise price by at least 1% or the number of Warrant Shares purchasable upon exercise by at least one one-hundredth of a Warrant Share. Further, no adjustment will be made for Common Shares issued: (i) upon exercise of the Warrants; (ii) pursuant to any dividend reinvestment or similar plan adopted by the Company; (iii) pursuant to stock option or purchase plans, as payment of interest on outstanding notes, in connection with strategic license agreements or other partnering arrangements; or (iv) in connection with a strategic merger, consolidation or purchase of substantially all of the securities or assets of a corporation or other entity.

The Company will also covenant in the Warrant Indenture that, during the period in which the Warrants are exercisable, it will give notice to holders of Warrants of certain stated events, including events that would result in an adjustment to the exercise price for the Warrants or the number of Warrant Shares issuable upon exercise of the Warrants, at least 10 days prior to the record date or effective date, as the case may be, of such event.

If, at any time while the Warrants are outstanding, the Company undergoes a Fundamental Transaction (as defined in the Warrant Indenture) then the holder is entitled to receive, upon exercise of the Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Common Shares then issuable upon exercise of the Warrant, and any additional consideration payable as part of the Fundamental Transaction. Any successor to the Company or surviving entity is obligated to assume the obligations under the Warrant Indenture.

Holders of the Warrants are entitled to a "cashless exercise" option if, at any time of exercise, there is no effective registration statement registering, or no current prospectus available for, the issuance or resale of the Common Shares underlying the Warrants. The "cashless exercise" option entitles the holders of the Warrants to elect to receive fewer Common Shares without paying the cash exercise price. The number of shares to be issued would be determined by a formula based on the total number of shares with respect to which the Warrant is being exercised, the market price per Common Share at the time of exercise and the applicable exercise price of the Warrants issued in the Offering.

The Company will provide certain compensation to a holder if it fails to deliver the Common Shares underlying the Warrants by the first trading day after the date on which delivery of the stock certificate is required by the Warrant Indenture. Compensation may be available in certain circumstances if after the first trading day on which delivery of the Common Shares is required by the Warrant, the holder purchases (in an open market transaction or otherwise) Common Shares to deliver in satisfaction of a sale by the holder of the Warrant Shares that the holder anticipated receiving upon exercise of the Warrant.

If a Warrant holder is entitled to a fraction of a Warrant, the number of Warrants issued to that Warrant holder shall be rounded down to the nearest whole Warrant. No fractional Warrant Shares will be issuable upon the exercise of any Warrants; instead cash will be paid in lieu of fractional shares. Holders of Warrants will not have any voting rights or any other rights which a holder of Common Shares would have.

From time to time, the Company (when properly authorized) and the Warrant Agent, subject to the provisions of the Warrant Indenture, may amend or supplement the Warrant Indenture for certain purposes. Certain amendments or supplements to the Warrant Indenture may only be made by "extraordinary resolution", which is defined in the Warrant Indenture as a resolution either: (i) passed at a meeting of the holders of Warrants at which there are holders of Warrants present in person or represented by proxy representing at least 25% of the aggregate number of the then outstanding Warrants and passed by the affirmative vote of holders of Warrants representing not less than 66%% of the aggregate number of all the then outstanding Warrants represented at the meeting and voted on such resolution; or (ii) adopted by an instrument in writing signed by the holders of Warrants representing not less than 66%% of the aggregate number of all of the then outstanding Warrants.

The Company has not applied and does not intend to apply to list the Warrants on any securities exchange. There will be no market through which the Warrants may be sold and purchasers may not be able to resell the Warrants purchased in the Offering. This may affect the pricing of the Warrants in the secondary market, the transparency and availability of trading prices, the liquidity of the Warrants, and the extent of issuer regulation.

# **Book-Based System**

Registration of interests in, and transfers of, the Offered Shares and Warrants will be made only through the book-based system of CDS. Offered Shares and Warrants must be purchased and transferred only through a CDS participant. All rights of an owner of Offered Shares must be exercised through, and all payments or other property to which such owner is entitled will be made or delivered by, CDS or the CDS participant through which the owner holds such Offered Shares or Warrants. Upon purchase of any Offered Shares or Warrants, the owner will receive only the customary confirmation. References in this short form prospectus to a holder of Offered Shares or Warrants means, unless the context otherwise requires, the owner of the beneficial interest in such Offered Shares or Warrants. Physical certificates evidencing Offered Shares and Warrants will not be issued unless specifically requested or required.

The Company and the Agent will not have any liability for: (i) records maintained by CDS relating to the beneficial interests in the Offered Shares, Warrants or the book-based accounts maintained by CDS; (ii) maintaining, supervising or reviewing any records relating to such beneficial ownership interests; or (iii) any advice or representation made or given by CDS and made or given with respect to the rules and regulations of CDS or any action taken by CDS or at the direction of the CDS participants.

The ability of a beneficial owner of Offered Shares or Warrants to pledge such Offered Shares or Warrants or otherwise take action with respect to such owner's interest in such Offered Shares or Warrants (other than through a CDS participant) may be limited due to the lack of a physical certificate to the extent that such owner has not requested a physical certificate from the Company. The Company has the option to terminate registration of the Offered Shares and Warrants through the bookbased system in which case certificates for Offered Shares or Warrants in fully registered form may be issued to beneficial owners of such Offered Shares or Warrants or to their nominees.

## CAPITALIZATION

The following summarizes the changes in the Company's capitalization since December 31, 2018, the last day of the Company's most recently completed fiscal year in respect of which financial statements have been filed, after giving effect to the Minimum Offering and the Maximum Offering. The following table should be read in conjunction with the Annual Financial Statements and the Annual MD&A incorporated by reference in this short form prospectus.

Description of Capital	Outstanding as at December 31, 2018 (US \$)	Outstanding as at December 31, 2018 after giving effect to the Minimum Offering (US \$) <sup>(1)</sup>	Outstanding as at December 31, 2018 after giving effect to the Maximum Offering (US \$) <sup>(1)</sup>
Share Capital	\$170,502,394 (21,675,849 Common Shares)	\$177,490,629 (27,558,202 Common Shares <sup>(2)</sup> )	\$179,237,688 (29,028,790 Common Shares <sup>(2)</sup> )
Warrants	\$11,250,167 (13,901,859 Warrants <sup>(4)</sup> )	\$22,261,932 (19,784,212 Warrants <sup>(4)</sup> )	\$25,014,873 (21,254,800 Warrants <sup>(4)</sup> )
Contributed Surplus	\$ 6,652,409	\$ 6,652,409	\$ 6,652,409
Common Shares Underlying Stock Options	925,782 Common Shares	925,782 Common Shares	925,782 Common Shares

#### Notes:

- Does not include the exercise of any options, warrants and broker warrants since December 31, 2018. For details of the share issuances in connection with such exercises, please see "Prior Sales" in this short form prospectus.
- (2) Assuming no exercise of the Over-Allotment Option and no exercise of the Broker Warrants to be issued in connection with the Offering. Upon the exercise of all of the Broker Warrants issuable under the Minimum Offering into Broker Warrant Shares, there would be issued and outstanding 27,969,967 Common Shares. Upon the exercise of all of the Broker Warrants issuable under the Maximum Offering into Broker Warrant Shares, there would be issued and outstanding 29,543,496 Common Shares.
- (3) Figures are based on the daily exchange rate as quoted by the Bank of Canada on March 15, 2019 of US \$1.00 = CDN \$1.3342.
- (4) Assuming no exercise of the Over-Allotment Option and excludes broker warrants issued by the Company. As at March 15, 2019, the Company had issued and outstanding 786,183 broker warrants and it will have 1,197,948 broker warrants issued and outstanding in the event of the Minimum Offering and 1,300,889 broker warrants issued and outstanding in the event of the Maximum Offering. This assumes no current holder of a broker warrant exercises any or all of such securities.

#### USE OF PROCEEDS

# **Proceeds and Funds Available**

The Company intends to use the net proceeds from the Offering to continue development of the SPORT Surgical System.

For the twelve months ended December 31, 2018, cash used in operating activities by the Company was US \$41.4 million, and the Company had a net loss of US \$22.6 million. For the twelve months ended December 31, 2017, cash used in operating activities by the Company was US \$19.1 million and the Company had a net loss of US \$33.6 million. At February 28, 2019, the Company had an estimated US \$11.9 million in cash and cash deposits with suppliers consisting of approximately US \$1.8 million in cash and approximately US \$10.1 million in deposits with suppliers. Also at February 28, 2019, the Company had accrued liabilities of \$5.3 million excluding warrant liability and the Company had estimated working capital of approximately US \$7.2 million excluding warrant liability.

The Company estimates that the costs to complete Milestones 4 and 5 in the first and second quarters of 2019 will total approximately US\$32.9 million. All of these estimated capital requirements will be satisfied using the net funds raised pursuant to the August Offering and this Offering. The net proceeds of the Minimum Offering will be used to complete Milestones 4 and 5. If the Maximum Offering is completed and the Over-Allotment Option is exercised in full, the net proceeds will be used to complete Milestones 4 and 5 and advance Milestone 6.

The Company will invest the net proceeds of the Offering in short-term interest-bearing investment grade securities until required for use. Any additional proceeds received from the exercise of the Company's outstanding warrants will be used for research and development and for general corporate and working capital purposes.

The Company intends to use the net proceeds of the Offering as follows:

	<u>Approximate Proceeds from the</u> <u>Minimum Offering</u>	Approximate Proceeds from the Maximum Offering
Milestone 4 <sup>(1)</sup>	US \$4.0 million	US \$4.0 million
Milestone 5	US \$13.5 million	US \$15.5 million
Milestone 6	-	US \$ 1.6 million
Working Capital	US \$500,000	US \$1.4 million
Total Net Proceeds(2)	US \$18.0 million	US \$22.5 million

- (1) As of the date of this short form prospectus, approximately US \$12.0 million has been expended on Milestone 4.
- (2) Assuming no exercise of the Over-Allotment Option.

To the extent that the net proceeds from the Minimum Offering are not sufficient to complete Milestone 5, the Company will draw upon available cash resources, including supplier deposits, to fund any such shortfall.

The amount of the Company's deposit with its primary product development supplier is based on forecasted invoices with the supplier and the Company's cash position on a monthly basis. Provided that the Company has sufficient financial resources to finance 12 months of operations, no deposit is required. If the Company has financial resources sufficient to finance operations for 6-12 months, then an amount equivalent to the projected amount of the next month's invoice from the supplier is required as the deposit. If the Company has financial resources that would fund less than six months of operations, then a deposit equal to two months of projected invoices from the supplier is required. Balancing adjustments to the amount of the deposit are made on a monthly basis, crediting outstanding invoices when the amount that is on deposit exceeds the amount that would otherwise be required to be on deposit. In the event that other cash is not available to pay the outstanding invoices of the primary product development supplier, there are no restrictions preventing the Company from applying these deposit amounts towards the R&D work of the primary product development supplier required to complete Milestones 4 and 5. Approximately 95% of the remaining estimated costs for Milestones 4 and 5 will be conducted with the primary product development supplier.

Please see "The Business - Development Objectives" for a description of the development milestones of the Company and the estimated costs associated therewith.

The Company expects that following human factors evaluation by surgeon experts, the addition of design freeze, initiation of preclinical live animal (swine) and cadaver studies according to final protocols for FDA submittal, and submittal of the IDE application to the FDA, the completion of Milestone 5 is a significant milestone. The achievement of design freeze follows the software integration of the numerous subsystems of the robotic system, as well as the implementation of hardware design improvements.

Regarding studies, through Q-submission correspondence, the FDA has communicated that both acute (non-survival) and chronic (survival) animal studies, as well as human cadaver studies will be required in the Company's FDA 510(k) submission. During 2018, the Company confirmed with the FDA that confirmatory human data will be required for its planned regulatory submission and the performance of human surgeries with the SPORT Surgical System will require an IDE from the FDA, which must be submitted and approved in advance. With the scheduled completion of Milestone 5 in Q2 2019, the Company expects to be positioned to seek additional funds for the collection of essential data for its regulatory filings.

The Company intends to use the funds available to it as stated in this short form prospectus; however, there may be circumstances where, for sound business reasons, a reallocation of funds may be deemed prudent or necessary.

Additional funding will be required, despite completion of the Offering, for the development and commercialization of the SPORT Surgical System, the estimated costs for which are discussed under "The Business – Development Objectives" of this short form prospectus.

The Company anticipates that it will be able to continue to operate for approximately two months from the date of this short form prospectus based on its estimated cash on hand, deposits with subcontractors and short-term securities and its projected expenditures. This two-month estimate assumes continued work on the SPORT Surgical System by the Company's contract manufacturer engaged by the Company at the current pace.

If the full proceeds of the Minimum Offering are received by the Company, it is expected that the Company would be able to continue to operate for approximately 3.5 months from the date of this short form prospectus and to complete Milestone 4 in the first quarter of 2019, and Milestone 5 in the second quarter of 2019, as set forth in the milestone table under "The Business – Development Objectives – Current Development Plan". If the full proceeds of the Maximum Offering are received by the Company, it is expected that the Company would be able to continue to operate for approximately 4.5 months from the date of this short form prospectus and to complete Milestones 4 and 5 in the first and second quarters of 2019 and advance to Milestone 6, as set forth in the milestone table under "The Business – Development Objectives – Current Development Plan".

The Company has not generated any revenue from product sales to date and it is possible that it will never have sufficient product sales revenue to achieve profitability and positive cash flow. Management expects that the Company will continue to incur losses for at least the next several years as it pursues further development of the SPORT Surgical System, preclinical studies and preparation for regulatory submittal. To become profitable, the Company must successfully develop, manufacture, market and sell the SPORT Surgical System, as well as related consumable products and accessories. Based on the highly competitive medical device market, it is possible that the Company will never achieve significant product sales revenue. If funding is insufficient at any time in the future, the Company may not be able to develop or commercialize its products, take advantage of business opportunities or respond to competitive pressures. It is expected that some of the proceeds from the Offering will be used to fund anticipated negative cash flow from operating activities, as described above and detailed below. See "Risk Factors".

## PLAN OF DISTRIBUTION

Pursuant to the Agency Agreement entered into between the Company and the Agent, the Company has agreed to sell and the Agent has agreed to arrange, on a best efforts basis, for purchasers of a minimum of 5,882,353 Units and a maximum of 7,352,941 Units at a price of US\$3.40 per Unit payable in cash to the Company against delivery of the Units. The Units will immediately separate into Offered Shares and Warrants upon issuance. The Offering Price was determined by negotiation between the Company and the Agent.

The completion of the Offering may occur in one or more separate closings on one or more Closing Dates, as the Company and the Agent may agree. Provided that the Minimum Offering is subscribed for, it is expected that the first Closing Date will occur on or about March 21, 2019, or such other date as the Company and the Agent may agree.

If subscriptions for the Minimum Offering (US\$ 20,000,000) have not been received within 10 days following the date of issuance of a receipt for this short form prospectus, the Offering will not continue and the subscription proceeds will be returned to subscribers, without interest or deduction. In any event, the total period of the distribution will not end more than 45 days from the date of issuance of a receipt for this short form prospectus. Should a closing occur in respect of the Minimum Offering, one or more additional closings, if necessary, may occur until the earlier of the Maximum Offering being subscribed and the expiry of the 45-day period.

There can be no assurance that any or all of the Units being offered will be sold.

The Offering will be subject to subscriptions being received for the Minimum Offering. All funds received by the Agent will be held in trust until the Minimum Offering has been attained. All subscription funds received by the Agent will be returned, without any deductions, to investors if the Minimum Offering is not attained by the Closing Date.

Pending receipt of the Minimum Offering amount by the Agent, all subscription proceeds from United States investors will be placed in an escrow account established by the United States sub-agent for this purpose, in accordance with U.S. SEC Rule 10b-9 and applicable FINRA rules, with Bridgewater Bank, Bloomington, MN, as escrow agent, to be released to the Agent (and then to the Company) at the first Closing Date.

The Warrants will be created and issued pursuant to the terms of the Warrant Indenture. Each Warrant will entitle the holder thereof to purchase one Warrant Share at an exercise price of US \$4.00 per Warrant Share, subject to adjustment, at any time until 5:00 p.m. (Toronto time) on the date that is 60 months after the first Closing Date, after which time the Warrants will expire and be void and of no value. The Warrant Indenture will contain provisions designed to protect the holders of Warrants against dilution upon the happening of certain events. No fractional Common Shares will be issued upon the exercise of any Warrants.

The obligations of the Agent under the Agency Agreement may be terminated by the Agent at any time in its sole discretion on the basis of its assessment of the state of the financial markets and on the occurrence of certain stated events. While the Agent has agreed to use its best efforts to sell the Units offered hereby, the Agent is not obligated to purchase Units that are not sold.

The Company has granted the Agent the Over-Allotment Option, exercisable in whole or in part at any time and from time to time for a period from the date hereof to 30 days following the first Closing Date, to offer for sale such number of additional Units as is equal to 15% of the number of Units issued under the Offering, solely to cover over-allotments, if any, and for market stabilization purposes. The Over-Allotment Option may be exercised by the Agent in respect of Over-Allotment Units at the Offering Price, Over-Allotment Warrants at a price of US \$2.08 per Over-Allotment Warrant and/or any combination of Over-Allotment Units and/or Over-Allotment Warrants so long as the aggregate number of Over-Allotment Units and/or Over-Allotment Warrants does not exceed 15% of the number of Units issued under the Offering (excluding those pursuant to the Over-Allotment Option). Any United States registered broker-dealers that are appointed by the Agent as sub-agents will not participate in the exercise of the Over-Allotment Option or sale of any Over-Allotment Units and/or Over-Allotment Warrants. This short form prospectus qualifies the grant of the Over-Allotment Option and the distribution of the Over-Allotment Units and/or the Over-Allotment Warrants. A purchaser who acquires securities forming part of the Agent's over-allocation position acquires those securities under this short form prospectus, regardless of whether such over-allocation position is ultimately filled through the exercise of the Over-Allotment Option or through secondary market purchases.

Subscriptions for the Units will be received subject to rejection or allotment in whole or in part and the right is reserved to close the subscription books at any time without notice. Pursuant to the Agency Agreement, the Company has appointed the Agent to offer the Units to the public pursuant to the securities legislation of each of the provinces of British Columbia, Alberta and Ontario. The Agent will also offer for sale the Units in the United States, by or through United States registered broker-dealers that may be appointed by the Agent as sub-agents, pursuant to the MJDS implemented by securities regulatory authorities in the United States and Canada. In addition, the Agent is entitled to offer the Units outside of Canada and the United States to non-U.S. persons provided that the Agent shall not take any action in connection with the distribution of the Units that would result in the Company being obligated to comply with the prospectus, registration, reporting or other similar requirements of the securities laws of any jurisdiction.

In consideration of such services, the Company has agreed to pay, on each Closing Date, the Agent's Commission of 7% of the gross proceeds of the Offering (or US \$.238 per Unit) including any proceeds raised through the sale of Over-Allotment Units and/or Over-Allotment Warrants pursuant to the exercise of the Over-Allotment Option.

The Company has also agreed to grant, on each Closing Date, a number of Broker Warrants to the Agent and its designees equal to 7% of the aggregate number of Units issued pursuant to the Offering on such Closing Date, including those Over-Allotment Units and/or Over-Allotment Warrants issued pursuant to the Over-Allotment Option. Each Broker Warrant, whether issued on the first Closing Date or a subsequent Closing Date, shall be exercisable for a period of 24 months following the first Closing Date for one Broker Warrant Share at an exercise price equal to the Offering Price. This short form prospectus qualifies the grant of the Broker Warrants.

Any Broker Warrants and any Broker Warrant Shares received by United States registered broker-dealers that are appointed by the Agent as sub-agents shall be granted only in respect of Units sold in the Offering and not pursuant to the exercise of the Over-Allotment Option. Pursuant to FINRA Rule 5110(g), such Broker Warrants and Broker Warrant Shares shall not be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days immediately following the date of effectiveness or commencement of sales of this offering, except the transfer of any security: (i) by operation of law or by reason of the Company's reorganization; (ii) to any FINRA member firm participating in the offering and the officers or partners thereof, if all securities so transferred remain subject to the lock-up restriction set forth above for the remainder of the time period; (iii) if the aggregate amount of the Company's securities held by the underwriter or related persons do not exceed 1% of the securities being offered; (iv) that is beneficially owned on a pro rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund and the participating members in the aggregate do not own more than 10% of the equity in the fund; or (v) the exercise or conversion of any security, if all securities remain subject to the lock-up restriction set forth above for the remainder of the time period.

The Company has agreed to reimburse the legal fees and expenses of any United States registered broker-dealers that are appointed by the Agent as sub-agents in an amount not to exceed US \$15,000 in the aggregate.

Certificates evidencing the Offered Shares and the Warrants will not be issued unless a request for a certificate is made to the Company.

The Company has applied to and has received the conditional approval of the TSX to list the Offered Shares, the Warrant Shares, the Over-Allotment Shares and the Broker Warrant Shares distributed under this short form prospectus on the TSX and Nasdaq, respectively. The Company has notified Nasdaq of the listing of the Offered Shares, the Warrant Shares, the Over-Allotment Shares distributed under this short form prospectus on the Nasdaq. Listing will be subject to the Company fulfilling all of the listing requirements of the TSX and Nasdaq. The Company has not applied and does not intend to apply to list the Warrants or the Over-Allotment Warrants on any securities exchange. There will be no market through which the Warrants or the Over-Allotment Warrants may be sold and purchasers may not be able to resell the Warrants or the Over-Allotment Warrants in the secondary market, the transparency and availability of trading prices, the liquidity of the Warrants or the Over-Allotment Warrants and the extent of issuer regulation. See "Description of Offered Securities – Warrants".

The Company has agreed to indemnify the Agent and its directors, officers, employees, shareholders and agents against any and all fees, costs, expenses, losses, claims, actions, damages, fines, penalties, or liabilities of any nature whatsoever, joint or several, that arise out of or are based, directly or indirectly, upon the performance of the professional services rendered to the Company by the Agent or its directors, officers, employees, shareholders or agents pursuant to the Agency Agreement. This indemnity does not apply to the extent such fees, costs, expenses, losses, claims, actions, damages, fines, penalties, or liabilities as to which indemnification is claimed arise solely out of gross negligence or wilful misconduct in the performance of such professional services.

Pursuant to policy statements of certain Canadian provincial securities commissions and similar authorities, the Agent may not, throughout the period of distribution, bid for or purchase Common Shares. The foregoing restriction is subject to certain exceptions, on the conditions that the bid or purchase not be engaged in for the purpose of creating actual or apparent active trading in, or raising the price of, the Common Shares. These exceptions include: (a) a bid or purchase permitted under the Universal Market Integrity Rules for Canadian Marketplaces administered by the Investment Industry Regulatory Organization of Canada relating to market stabilization and passive market making activities, (b) a bid or purchase made for and on behalf of a customer where the order was not solicited during the period of the distribution, provided that the bid or purchase was for the purpose of maintaining a fair and orderly market and not engaged in for the purpose of creating actual or apparent active trading in, or raising the price of, such securities, or (c) a bid or purchase to cover a short position entered into prior to the commencement of a prescribed restricted period. Consistent with these requirements, and in connection with this distribution, the Agent may over-allot or effect transactions that stabilize or maintain the market price of the Common Shares at levels other than those which otherwise might prevail on the open market. If these activities are commenced, they may be discontinued by the Agent at any time. The Agent may carry out these transactions on the TSX, on the Nasdaq or otherwise.

## ENFORCEABILITY OF CIVIL LIABILITIES

The Company is a corporation existing under and governed by the Business Corporations Act (Ontario). A number of the directors and officers of the Company, and some of the experts named in this short form prospectus, are residents of Canada or otherwise reside outside the United States and a substantial portion of the Company's assets and the assets of such persons are located outside the United States. The Company has appointed an agent for service of process in the United States, but it may be difficult for holders of Offered Shares and Warrants who reside in the United States to effect service within the United States upon those directors, officers and experts who are not residents of the United States. It may also be difficult for holders of Offered Shares and Warrants who reside in the United States to realize in the United States upon judgments of courts of the United States predicated upon the Company's civil liability and the civil liability of the directors and officers of the Company and experts under U.S. federal securities laws.

The Company has been advised by its Canadian counsel, Borden Ladner Gervais LLP, that, subject to certain limitations, a judgment of a U.S. court predicated solely upon civil liability under U.S. federal securities laws may be enforceable in Canada if the U.S. court in which the judgment was obtained has a basis for jurisdiction in the matter that would be recognized by a Canadian court for the same purposes. The Company has also been advised by Borden Ladner Gervais LLP, however, that there is substantial doubt whether an action could be brought in Canada in the first instance on the basis of liability predicated solely upon U.S. federal securities laws without further substantial connection to Canada or its residents.

Concurrently with filing its registration statement on Form F-10 of which this short form prospectus forms a part, the Company filed a Form F-X, pursuant to which the Company appointed CT Corporation System as its agent for service of process in the United States in connection with any investigation or administrative proceeding conducted by the SEC, and any civil suit or action brought against or involving the Company in a U.S. court arising out of or related to or concerning the Offering.

## RISK FACTORS

Investing in the Company's securities is speculative and involves a high degree of risk. You should carefully consider the risks set out below and under the heading "Risk Factors" beginning on page 16 of the AIF, and the other documents incorporated by reference in this short form prospectus that summarize the risks that may materially affect the Company's business before making an investment in the Company's securities. Please see "Documents Incorporated by Reference". If any of these risks occur, the Company's business, results of operations or financial condition could be materially adversely affected. In that case, the trading price of the securities could decline, and you may lose all or part of your investment. The risks set out in the documents indicated above are not the only risks the Company faces. You should also refer to the other information set forth in this short form prospectus as well as those incorporated by reference herein and therein, including financial statements and the related notes.

Risk Factors Related to the Company

## Additional Financing and Going Concern

The Company will require additional financing in order to continue its research and development program through to completion and take advantage of future opportunities. The ability of the Company to arrange such financing in the future will depend in part upon prevailing capital market conditions, as well as upon the business success of the Company. There can be no assurance that the Company will be successful in its efforts to arrange additional financing on terms satisfactory to the Company. If additional financing is raised by the issuance of shares or convertible securities from treasury, control of the Company may change and shareholders may suffer additional dilution. If adequate funds are not available, or are not available on acceptable terms, the Company may not be able to take advantage of opportunities or otherwise respond to competitive pressures and the Company will need to reduce its development plan in order to continue as a going concern.

# History of Losses

The Company has a history of losses, and there is no assurance that any of its contemplated products will generate sustainable earnings, be profitable or provide a return on investment in the future. The Company has not paid dividends in the past. Its directors will determine the future dividend policy of the Company if the Company generates earnings in the future, based on operational circumstances at that time. The Company had negative cash flow from operating activities for its fiscal year ended December 31, 2018 and this negative cash flow is expected to continue.

## Trade-marks

Although the Company has registrations and pending applications for certain trade-marks, it may not own or license trade-mark registrations for the marks and names that it is currently using in connection with products under development, or for the Company's name, in any jurisdiction including the proposed principal markets where the Company plans to market and sell the SPORT Surgical System following regulatory clearance and commercialization of its surgical system. The Company may be unable to obtain or maintain trade-mark registrations for the marks and names it uses in one or more countries. It is possible that the use of "SPORT", "SPORT Surgical System", "Titan", "Titan Medical" or variations thereof may infringe or contravene the rights, including trade-mark rights, of other parties in one or more countries. In the event of actual or alleged infringement or contravention of rights, the Company may be forced to cease using these marks and names. There may be a substantial risk of litigation or other legal proceedings in one or more countries relating to the alleged infringement or contravention of another party's trade-mark rights. These proceedings may occur even if the Company ceases using these marks and names. The Company may incur substantial costs to defend and/or enforce its rights, if any, in these marks and names in such legal proceedings. The Company may not be successful in such legal proceedings, and may be required or agree to cease using these marks and names and pay other parties significant amounts of money. The Company may incur substantial costs to change the names and marks used by it, including the names and marks used in association with its products. In any such events, the business and operations of the Company could be materially adversely affected.

# Regulatory

In order to legally market and sell its products in the United States and Europe, the Company must successfully achieve premarket clearance from the FDA and the CE Mark from European authorities, respectively. In preliminary correspondence, based on the limited data submitted to date regarding the SPORT Surgical System, and depending on its intended indications for use, and the selected predicate device, the FDA has indicated that in addition to preclinical human factors, bench, animal, and human cadaver studies, it expects that confirmatory human clinical performance testing will be necessary for demonstrating substantial equivalence. However, the FDA also indicated that preclinical evaluations using acute and chronic in vivo models and cadaver testing may be used to help establish substantial equivalence and reduce the extent of confirmatory clinical testing necessary. Given the uncertainty of, among other things, product development timelines, regulatory requirements, the timing and number of future animal studies, human cadaver and clinical studies that may be required, and the availability of required capital to fund development and operating costs, the actual costs and timing of completion of development and commercialization of the SPORT Surgical System including the obtaining of required regulatory approvals may exceed management's current expectations.

## **Profitability**

There is no assurance that the Company will earn profits in the future, or that profitability will be sustained. The medical device industry requires significant financial resources, and there is no assurance that future revenues will be sufficient to generate the funds required to continue the Company's business development and marketing activities. If the Company does not have sufficient capital to fund its operations, it may be required to reduce its research and development efforts or in the future reduce its marketing efforts or forego certain business opportunities.

## Reliance on External Suppliers and Development Firms

The Company is dependent on external suppliers and development firms to conduct its technology research and development and manufacturing of evaluation units of the SPORT Surgical System. If these external firms seek to impose conditions on their obligations to conduct their work for the Company in addition to or different from the terms set forth in their engagement agreements and the Company is unable to satisfy those conditions or they do not otherwise perform as contractually required or expected, the Company may not be able to complete the development of the SPORT Surgical System, or may be delayed in doing so, and the costs for developing the Company's products may significantly increase beyond those forecasted. In the event that the external development firms do not resume, or they do not otherwise carry on, the development work on the SPORT Surgical System on conditions and in a manner that is agreeable to the Company, it may engage other firms to take on the development work and in that case, the estimated costs of the development milestones set forth in this short form prospectus may increase and the schedule for completion of each milestone may be delayed.

The Company relies heavily on external parties for successful execution of the SPORT Surgical System development program, but do not control many aspects of their activities. As a result, many important aspects (including costs and timing) of product development are outside the Company's direct control.

The Company is responsible for ensuring that the SPORT Surgical System is being developed to meet the guidelines and requirements of the FDA and other regulatory authorities, applicable laws and regulations and industry standards. The Company's reliance on third parties does not relieve it of these responsibilities.

Additionally, if the external firms conducting preclinical studies do not perform their contractual duties or obligations, do not meet expected deadlines, fail to comply with the good laboratory practice regulations, do not adhere to specified study protocols or otherwise fail to generate reliable clinical data, development, approval and commercialization of the Company's products, may be extended, delayed or terminated or may need to be repeated, costs may significantly increase and the Company may not be able to obtain regulatory approval within the time frames forecasted, if at all.

#### Share Consolidation

# Potential for Adverse Effect on the Liquidity of the Common Shares

As a result of the implementation of the Share Consolidation, if the market price of the Common Shares declines, the percentage decline may be greater than would have occurred in the absence of the Share Consolidation. The market price of the Common Shares will, however, also be based on the Company's performance and other factors, which are unrelated to the number of Common Shares outstanding. Furthermore, the liquidity of Common Shares could be adversely affected by the reduced number of consolidated Common Shares that are currently outstanding.

# There is no assurance the Company will continue to meet the listing requirements of the TSX and the Nasdaq.

The Company must meet continuing listing requirements to maintain the listing of the Common Shares on the TSX and the Nasdaq. The inability to meet the continuing listing requirements could adversely affect the Company's results of operations or financial condition.

## The Company may lose its status as a foreign private issuer.

In order to maintain its status as a foreign private issuer, a majority of the Common Shares must be either directly or indirectly owned by non-residents of the U.S. unless the Company also satisfies one of the additional requirements necessary to preserve this status. The Company may in the future lose its foreign private issuer status if a majority of its Common Shares are held in the United States and if it fails to meet the additional requirements necessary to avoid loss of its foreign private issuer status. The regulatory and compliance costs under U.S. federal securities laws as a U.S. domestic issuer may be significantly more than the costs incurred as a Canadian foreign private issuer issuer issuer issuer issuer than the costs incurred as a majority of the Company is not a foreign private issuer, it would not be eligible to use the MJDS or other foreign issuer forms and would be required to file periodic and current reports and registration statements on U.S. domestic issuer forms with the SEC, which are more detailed and extensive than the forms available to a foreign private issuer. In addition, the Company may lose the ability to rely upon exemptions from NYSE corporate governance requirements that are available to foreign private issuers.

# The Company is an "emerging growth company" and cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make it less attractive to investors.

The Company is an "emerging growth company" as defined in the JOBS Act. The Company will continue to qualify as an "emerging growth company" until the earliest to occur of: (a) the last day of the fiscal year during which the Company had total annual gross revenues of US\$1,070,000,000 or more; (b) the last day of its fiscal year following the fifth anniversary of the date of the first sale of the Company's common equity securities pursuant to an effective registration statement under the U.S. Securities Act, such as the Form F-10 registration statement that is being filed concurrently with this short form prospectus; (c) the date on which the Company, during the previous 3-year period, issued more than US\$1,000,000,000 in non-convertible debt; or (d) the date on which the Company is deemed to be a 'large accelerated filer.'

For so long as the Company continues to qualify as an emerging growth company, it will be exempt from the requirement to include an auditor attestation report relating to internal control over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act in its annual reports filed under the U.S. Exchange Act, as amended, even if it does not qualify as a "smaller reporting company," as well as certain other exemptions from various reporting requirements that are applicable to other public companies.

## Risk Factors Related to the Offering and the Units

# There can be no assurance that the Offering will be completed

The completion of the Offering is subject to the completion of definitive binding documentation and satisfaction of a number of conditions. There can be no certainty that the Offering will be completed.

# There will be no market for the Warrants

The Company has not applied and does not intend to apply to list the Warrants on any securities exchange. There will be no market through which the Warrants may be sold and purchasers may not be able to resell the Warrants purchased in the Offering. This may affect the pricing of the Warrants in the secondary market, the transparency and availability of trading prices, the liquidity of the Warrants, and the extent of issuer regulation. The Offering Price has been determined by negotiations between the Company and the Agent. The allocation of the Offering Price between the Offered Shares and the Warrants comprising the Units has been determined by the Company.

# Enforcement of judgments against foreign persons may not be possible

Canadian investors should be aware that each of the Non-Resident Directors resides outside of Canada; as a result, it may not be possible for purchasers of the Units to effect service of process within Canada upon the Non-Resident Directors. All or a substantial portion of the assets of each of the Non-Resident Directors are likely to be located outside of Canada and, as a result, it may not be possible to satisfy a judgment against the Non-Resident Directors in Canada or to enforce a judgment obtained in Canadian courts against the Non-Resident Directors outside of Canada.

#### The Company is subject to risks related to additional regulatory burden and controls over financial reporting

The Company is subject to the continuous and timely disclosure requirements of Canadian securities laws and the rules, regulations and policies of the TSX, the Nasdaq and the SEC. These rules, regulations and policies relate to, among other things, corporate governance, corporate controls, internal audit, disclosure controls and procedures and financial reporting and accounting systems. The Company has made, and will continue to make, changes in these and other areas, including the Company's internal controls over financial reporting. However, there is no assurance that these and other measures that it may take will be sufficient to allow the Company to satisfy its obligations as a public company on a timely basis. In addition, compliance with reporting and other requirements applicable to public companies create additional costs for the Company and require the time and attention of management of the Company. The Company cannot predict the amount of the additional costs that the Company may incur, the timing of such costs or the impact that management's attention to these matters will have on the Company's business. In addition, the Company's inability to maintain effective internal controls over financial reporting could increase the risk of an error in its financial statements. The Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives due to its inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is therefore subject to error, improper override or improper application of the internal controls. Because of such limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis, and although it is possible to incorporate safeguards into the financial reporting process to reduce this risk, they cannot be guaranteed to entirely eliminate it. If the Company fails to maintain effective internal control over financial reporting, then there is an increased risk of an error in the Company's financial statements that could result in the Company being required to restate previously issued financial statements at a later date.

The Company is also subject to corporate governance standards that apply to it as a foreign issuer listed on the Nasdaq and registered with the SEC in the United States. Although the Company substantially complies with the Nasdaq's corporate governance guidelines, it is exempt from certain Nasdaq requirements because the Company is subject to Canadian corporate governance requirements. The Company may from time to time seek other relief from corporate governance and exchange requirements and securities laws from the Nasdaq and other regulators.

# The Company is likely a "passive foreign investment company", which may have adverse U.S. federal income tax consequences for U.S. investors.

Potential investors in the Units who are U.S. taxpayers should be aware that the Company believes it was classified as a "passive foreign investment company" or "PFIC" during the tax year ended December 31, 2018, and based on current business plans and financial expectations, the Company expects that it may be a PFIC for the current tax year and future tax years. If the Company is a PFIC for any year during a U.S. taxpayer's holding period of Common Shares, Warrants or Warrant Shares, then such U.S. taxpayer generally will be required to treat any gain realized upon a disposition of the Common Shares, Warrants or Warrant Shares or any socalled "excess distribution" received on its Common Shares and Warrant Shares, as ordinary income, and to pay an interest charge on a portion of such gain or distribution. In certain circumstances, the sum of the tax and the interest charge may exceed the total amount of proceeds realized on the disposition, or the amount of excess distribution received, by the U.S. taxpayer. Subject to certain limitations, these tax consequences may be mitigated if a U.S. taxpayer makes a timely and effective QEF Election or a Mark-to-Market Election. Subject to certain limitations, such elections may be made with respect to the Common Shares and Warrant Shares. A U.S. taxpayer may not make a QEF Election or Mark-to-Market Election with respect to the Warrants. A U.S. taxpayer who makes a timely and effective QEF Election generally must report on a current basis its share of the Company's net capital gain and ordinary earnings for any year in which the Company is a PFIC, whether or not the Company distributes any amounts to its shareholders. However, U.S. taxpayers should be aware that there can be no assurance that the Company will satisfy the record keeping requirements that apply to a qualified electing fund, or that the Company will supply U.S. taxpayers with information that such U.S. taxpayers require to report under the QEF Election rules, in the event that the Company is a PFIC and a U.S. taxpayer wishes to make a QEF Election. Thus, U.S. taxpayers may not be able to make a QEF Election with respect to their Common Shares. A U.S. taxpayer who makes the Mark-to-Market Election generally must include as ordinary income each year the excess of the fair market value of the Common Shares or Warrant Shares over the taxpayer's basis therein. This paragraph is qualified in its entirety by the discussion below under the heading "Certain United States Federal Income Tax Considerations — Passive Foreign Investment Company Rules." Each potential investor who is a U.S. taxpayer should consult its own tax advisor regarding the tax consequences of the PFIC rules and the acquisition, ownership, and disposition of the Common Shares, Warrants and the Warrant Shares.

## ELIGIBILITY FOR INVESTMENT

In the opinion of Borden Ladner Gervais LLP, counsel for the Company, and Baker & McKenzie LLP, counsel to the Agent, based on the provisions of the *Income Tax Act* (Canada) (the "Tax Act") and the regulations thereunder (the "Regulations") in force as of the date hereof,

- the Offered Shares and Warrant Shares will, on the date of issue, be qualified investments for trusts governed by registered retirement savings plans (each a "RRSP"), registered education savings plans (each a "RESP"), registered retirement income funds (each a "RRIF"), registered disability savings plans (each a "RDSP"), deferred profit sharing plans and tax-free savings accounts (each a "TFSA"), all within the meaning of the Tax Act (collectively, "Plans") provided that the Offered Shares and Warrant Shares are listed on a "designated stock exchange" as defined in the Tax Act (which includes the TSX and Nasdaq); and
- the Warrants will, on the date of issue, be qualified investments for Plans provided that either (i) the Warrants are listed on a "designated stock exchange" as defined in the Tax Act (which includes the TSX and Nasdaq), or (ii) the Warrant Shares are listed on a "designated stock exchange" as defined in the Tax Act (which includes the TSX and Nasdaq) and the Company is not, and deals at arm's length with each person who is, an annuitant, a beneficiary, an employer or a subscriber under or a holder of such Plan.

Notwithstanding the foregoing, if the Offered Shares, Warrant Shares or Warrants held by a TFSA, RRSP, RRIF, RDSP or RESP are "prohibited investments" for purposes of the Tax Act, the holder of the TFSA or RDSP, the annuitant of the RRSP or RRIF or the subscriber of the RESP will be subject to a penalty tax as set out in the Tax Act. The Offered Shares, Warrant Shares and Warrants will be a "prohibited investment" if the holder of a TFSA or RDSP, the annuitant of a RRSP or RRIF or the subscriber of the RESP, as the case may be: (i) does not deal at arm's length with the Company for purposes of the Tax Act; or (ii) has a "significant interest" (within the meaning of the Tax Act) in the Company. In addition, the Offered Shares, Warrant Shares and Warrants are "excluded property", as defined in the Tax Act, for a TFSA, RRSP, RRIF, RDSP or RESP. Holders who intend to hold Offered Shares, Warrant Shares or Warrants in a TFSA, RRSP, RRIF, RDSP or RESP should consult their own tax advisors in this regard.

#### CERTAIN CANADIAN FEDERAL INCOME TAX CONSIDERATIONS

In the opinion of Borden Ladner Gervais LLP, counsel to the Company, and Baker & McKenzie LLP, counsel to the Agent, the following is, as of the date hereof, a summary of the principal Canadian federal income tax considerations generally applicable under the Tax Act and Regulations thereunder to the acquisition, holding and disposition of Offered Shares, Warrant Shares or Warrants by a holder ("Holder" and collectively, the "Holders") who acquires Units pursuant to this short form prospectus. For the purposes of this summary, the term "Common Shares" shall also include the Offered Shares and any Warrant Shares acquired upon the exercise of the Warrants, unless the context otherwise requires. This summary is applicable to a Holder who, for the purposes of the Tax Act and at all relevant times, deals at arm's length with, and is not affiliated with the Company and holds Common Shares and Warrants as capital property. Generally, the Common Shares or Warrants will be considered to be capital property to a Holder provided that the Holder does not hold such Common Shares or Warrants in the course of carrying on a business of trading or dealing in securities and has not acquired them in one or more transactions considered to be an adventure or concern in the nature of trade.

This summary is not applicable to a Holder: (i) that is a "financial institution" for purposes of the "mark-to-market" rules in the Tax Act; (ii) that is a "specified financial institution" within the meaning of the Tax Act; (iii) that reports its "Canadian tax results" within the meaning of the Tax Act in a currency other than Canadian currency; (iv) an interest in which is, a "tax shelter investment" within the meaning of the Tax Act; (v) that has entered or will enter into a "derivative forward agreement" or "synthetic disposition agreement", each within the meaning of the Tax Act, in respect of Common Shares and/or Warrants; or (vi) that receives dividends on Common Shares under or as part of a "dividend rental arrangement" within the meaning of the Tax Act.

This summary is based upon the current provisions of the Tax Act and the Regulations thereunder in force as of the date hereof, all specific proposals to amend the Tax Act and Regulations thereunder (the "Tax Proposals") which have been announced by or on behalf of the Minister of Finance (Canada) prior to the date hereof, and counsel's understanding of the current administrative policies and assessing practices of the Canada Revenue Agency (the "CRA") which have been made publicly available prior to the date hereof. This summary assumes that the Tax Proposals will be enacted in the form proposed and does not take into account or anticipate any other changes in law or in the administrative policies or assessing practices of the CRA, whether by way of judicial, legislative or governmental decision or action, nor does it take into account provincial, territorial or foreign income tax legislation or considerations, which may differ from the Canadian federal income tax considerations discussed herein. No assurances can be given that the Tax Proposals will be enacted as proposed or at all, or that legislative, judicial or administrative changes will not modify or change the statements expressed herein.

This summary is not exhaustive of all possible Canadian federal income tax considerations applicable to an investment in Common Shares or Warrants. Accordingly, this summary is of a general nature only and is not intended to be, nor should it be construed to be, legal or tax advice to any investor. Investors should consult their own tax advisors for advice with respect to the tax consequences of an investment in Common Shares and Warrants, based on their particular circumstances.

## **Currency Conversion**

For purposes of the Tax Act, all amounts relating to the acquisition, holding or disposition of Common Shares and Warrants (including dividends, adjusted cost base and proceeds of disposition) must generally be expressed in Canadian Dollars. Amounts denominated in any other currency must be converted into Canadian Dollars generally based on the exchange rate quoted by the Bank of Canada on the date such amounts arise or such other rate of exchange as is acceptable to the Minister of National Revenue (Canada).

#### Acquisition of Common Shares and Warrants

A reasonable allocation of the Offering Price between the Offered Share and the Warrant that comprise each Unit will be required to determine the cost of each to the Holder for purposes of the Tax Act. The Company has advised its counsel that, of the US \$3.40 Offering Price, the Company intends to allocate US \$1.32 to the Offered Share and US \$2.08 to the Warrant. Although the Company believes that such allocation is reasonable, it is not binding on the CRA or any Holder and the CRA may not agree with such allocation. Counsel expresses no opinion with respect to such allocation.

When Common Shares (including an Offered Share) or Warrants are acquired by a Holder who already owns Common Shares or Warrants, the cost of newly acquired Common Shares or Warrants will be averaged with the adjusted cost base of all Common Shares or Warrants, respectively, owned by the Holder as capital property before that time for the purpose of determining the Holder's adjusted cost base of all Common Shares and Warrants, as the case may be, held by such person.

# Exercise of Warrants

The exercise of a Warrant to acquire a Warrant Share will be deemed not to constitute a disposition of property for purposes of the Tax Act and consequently no gain or loss will be realized by a Holder upon such an exercise. When a Warrant is exercised, the Holder's cost of the Warrant Share acquired thereby will be equal to the aggregate of the Holder's adjusted cost base of such Warrant and the exercise price paid for the Warrant Share. The Holder's adjusted cost base of the Warrant Share so acquired will be determined by averaging such cost with the adjusted cost base to the Holder of all other Common Shares owned by the Holder and held as capital property immediately prior to such acquisition.

#### Holders Resident in Canada

The following section of this summary is generally applicable to a Holder who, for purposes of the Tax Act and any applicable tax treaty or convention, is or is deemed to be resident of Canada at all relevant times (a "Resident Holder"). Certain Resident Holders who might not otherwise be considered to hold Common Shares as capital property may, in certain circumstances, be entitled to have such Common Shares (but, for avoidance of doubt, not Warrants) and all other "Canadian securities" as defined in the Tax Act owned by them in the year in which the election is made and all subsequent taxation years treated as capital property by making an irrevocable election under subsection 39(4) of the Tax Act. Resident Holders contemplating such an election should consult their own advisors.

# Expiry of Warrants

In the event of the expiry of an unexercised Warrant, the Resident Holder will realize a capital loss equal to the Resident Holder's adjusted cost base of such Warrant. The tax treatment of capital gains and losses is discussed in greater detail below under the subheading "Capital Gains and Losses".

## Dividends

Dividends received or deemed to be received on the Common Shares will be included in computing the Resident Holder's income. In the case of a Resident Holder that is an individual (other than certain trusts) such dividends will be subject to the gross-up and dividend tax credit rules applicable in respect of taxable dividends received from "taxable Canadian corporations" (as defined in the Tax Act). An enhanced dividend tax credit will generally be available to a Resident Holder that is an individual in respect of dividends designated by the Company as "eligible dividends". There may be limitations on the ability of the Company to designate dividends as "eligible dividends". Resident Holders who are individuals (other than certain trusts) may be subject to alternative minimum tax in respect of taxable dividends.

In the case of a Resident Holder that is a corporation, the amount of any such taxable dividends that is included in its income for a taxation year received or deemed to be received on the Common Shares will generally be deductible in computing its taxable income for that taxation year. In certain circumstances, subsection 55(2) of the Tax Act will treat a taxable dividend received by a Resident Holder that is a corporation as proceeds of disposition or a capital gain. Resident Holders that are corporations should consult their own tax advisors having regard to their own circumstances.

Resident Holders that are "private corporations" (as defined in the Tax Act) or "subject corporations" (as defined in the Tax Act) may be subject to a refundable tax under Part IV of the Tax Act on dividends received (or deemed to be received) on the Common Shares to the extent such dividends are deductible in computing the Resident Holder's taxable income for the year. This refundable tax generally will be refunded to a Resident Holder that is a corporation when sufficient taxable dividends are paid to its shareholders while it is a private corporation or subject corporation.

# Disposition of Common Shares and Warrants

A disposition or deemed disposition by a Resident Holder of Common Shares (other than on a purchase for cancellation by the Company) or Warrants (which, as discussed above, does not include an exercise of Warrants to acquire such Warrant Shares) will generally give rise to a capital gain (or capital loss) equal to the amount by which the proceeds of disposition, net of reasonable costs of disposition, are greater (or less) than such Resident Holder's adjusted cost base of such Common Shares or Warrants, as the case may be, immediately before the disposition or deemed disposition.

The tax treatment of capital gains and losses is discussed in greater detail below under the subheading "Capital Gains and Losses".

## Capital Gains and Losses

Generally, one-half of any capital gain will be included in the Resident Holder's income as a taxable capital gain and one-half of any capital loss must normally be deducted as an allowable capital loss against taxable capital gains realized in the taxation year of disposition or deemed disposition to the extent and under the circumstances described in the Tax Act. Any unused allowable capital losses may be applied to reduce net taxable capital gains realized in the three preceding taxation years or any subsequent taxation year to the extent and in the circumstances prescribed in the Tax Act.

If the Resident Holder is a corporation, any capital loss arising on the disposition or deemed disposition of a Common Share may, in certain circumstances be reduced by the amount of any dividends previously received or deemed to have been previously received on the Common Share. Similar rules may apply to reduce any capital loss in respect of the disposition or deemed disposition of Common Shares held by a trust or partnership of which a corporation, partnership or trust is a member or beneficiary. Resident Holders to whom these rules may be relevant should consult their own tax advisors.

A Resident Holder that is a "Canadian-controlled private corporation" (as defined in the Tax Act) may be required to pay an additional refundable tax on certain investment income, including taxable capital gains. Resident Holders who are individuals (other than certain trusts) may be subject to alternative minimum tax in respect of capital gains.

Resident Holders should consult and rely on their own tax advisors with respect to the application of these additional taxes based on their own particular circumstances.

## **Holders Not Resident in Canada**

The following section of this summary is generally applicable to Holders who for the purposes of the Tax Act and any applicable tax treaty or convention and at all relevant times (i) have not been and will not be deemed to be resident in Canada at any time while they hold the Common Shares or Warrants; and (ii) do not use or hold the Common Shares or Warrants in carrying on a business in Canada ("Non-Resident Holders").

Special rules, which are not discussed in this summary, may apply to a Non-Resident Holder that is an insurer carrying on business in Canada and elsewhere. Such Non-Resident Holders should consult their own tax advisors.

#### Dividends

Dividends paid or credited or deemed to be paid or credited to a Non-Resident Holder by the Company will be subject to Canadian withholding tax at the rate of 25% on the gross amount of the dividend unless such rate is reduced by the terms of an applicable tax treaty. Under the *Canada-United States Tax Convention (1980)*, as amended (the "**Treaty**"), the rate of withholding tax on dividends paid or credited to a Non-Resident Holder who is resident in the U.S. for purposes of the Treaty and fully entitled to benefits under the Treaty (a "U.S. Holder") is generally limited to 15% of the gross amount of the dividend (or 5% in the case of a U.S. Holder that is a company beneficially owning at least 10% of the Company's voting shares).

# Dispositions of Common Shares and Warrants

A Non-Resident Holder generally will not be subject to tax under the Tax Act in respect of a capital gain realized on the disposition or deemed disposition of a Common Share or a Warrant, nor will capital losses arising therefrom be recognized under the Tax Act, unless the Common Share or Warrant constitutes "taxable Canadian property" to the Non-Resident Holder for purposes of the Tax Act, and the gain is not exempt from tax pursuant to the terms of an applicable tax treaty.

Provided the Common Shares are listed on a "designated stock exchange", as defined in the Tax Act (which includes the TSX and Nasdaq), at the time of disposition, the Common Shares and Warrants generally will not constitute taxable Canadian property of a Non-Resident Holder at that time, unless at any time during the 60 month period immediately preceding the disposition the following two conditions are met concurrently: (i) the Non-Resident Holder, persons with whom the Non-Resident Holder did not deal at arm's length, partnerships in which the Non-Resident Holder or such non-arm's length person holds a membership interest (either directly or indirectly through one or more partnerships), or the Non-Resident Holder together with all such persons, owned 25% or more of the issued shares of any class or series of shares of the Company; and (ii) more than 50% of the fair market value of the Common Shares of the Company was derived directly or indirectly from one or any combination of real or immovable property situated in Canada, "Canadian resource properties" (as defined in the Tax Act), "timber resource properties" (as defined in the Tax Act) or an option, an interest or right in such property, whether or not such property exists. Notwithstanding the foregoing, a Common Share or Warrant may otherwise be deemed to be taxable Canadian property to a Non-Resident Holder for purposes of the Tax Act in certain circumstances. A Non-Resident Holder's capital gain (or capital loss) in respect of a disposition of Common Shares or Warrants that constitute or are deemed to constitute taxable Canadian property to a Non-Resident Holder (and are not "treaty-protected property" as defined in the Tax Act) will generally be computed in the manner described above under the subheading "Holders Resident in Canada — Disposition of Common Shares and Warrants". Non-Resident Holders whose Common Shares or Warrants are taxable Canadian property should consult their own tax advisors regarding the tax and compliance considerations that may b

# CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS

The following is a general summary of certain U.S. federal income tax considerations applicable to a U.S. Holder (as defined below) arising from and relating to the acquisition, ownership and disposition of Units acquired pursuant to this short form prospectus, the acquisition, ownership, and disposition of Common Shares acquired as part of the Units, the exercise, disposition, and lapse of Warrants acquired as part of the Units, and the acquisition, ownership, and disposition of Warrant Shares received upon exercise of the Warrants.

This summary is for general information purposes only and does not purport to be a complete analysis or listing of all potential U.S. federal income tax considerations that may apply to a U.S. Holder as a result of the acquisition of Units pursuant to this Offering. In addition, this summary does not take into account the individual facts and circumstances of any particular U.S. Holder that may affect the U.S. federal income tax consequences to such U.S. Holder, including specific tax consequences to a U.S. Holder under an applicable tax treaty. Accordingly, this summary is not intended to be, and should not be construed as, legal or U.S. federal income tax advice with respect to any particular U.S. Holder. This summary does not address the U.S. federal alternative minimum, U.S. federal estate and gift, U.S. state and local, and non-U.S. tax consequences to U.S. Holders of the acquisition, ownership, and disposition of Units, Common Shares, Warrants and Warrant Shares. In addition, except as specifically set forth below, this summary does not discuss applicable tax reporting requirements. Each U.S. Holder should consult its own tax advisor regarding the U.S. federal alternative minimum, U.S. federal estate and gift, U.S. state and local, and non-U.S. tax consequences relating to the acquisition, ownership and disposition of Units, Common Shares, Warrants, and Warrant Shares.

No opinion from legal counsel or ruling from the Internal Revenue Service (the "IRS") has been requested, or will be obtained, regarding the U.S. federal income tax considerations applicable to U.S. Holders as discussed in this summary. This summary is not binding on the IRS, and the IRS is not precluded from taking a position that is different from, and contrary to, the positions taken in this summary. In addition, because the authorities on which this summary is based are subject to various interpretations, the IRS and the U.S. courts could disagree with one or more of the positions taken in this summary.

# Scope of this Summary

# **Authorities**

This summary is based on the Internal Revenue Code of 1986, as amended (the "Code"), Treasury Regulations (whether final, temporary, or proposed) promulgated under the Code, published rulings of the IRS, published administrative positions of the IRS and U.S. court decisions, that are in effect and available, as of the date of this document. Any of the authorities on which this summary is based could be changed in a material and adverse manner at any time, and any such change could be applied retroactively. This summary does not discuss the potential effects, whether adverse or beneficial, of any proposed legislation that, if enacted, could be applied on a retroactive or prospective basis.

# U.S. Holders

For purposes of this summary, the term "U.S. Holder" means a beneficial owner of Units, Common Shares, Warrants or Warrant Shares acquired pursuant to this U.S. Placement Memorandum that is for U.S. federal income tax purposes:

- a citizen or individual resident of the United States;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes)organized under the laws of the United States, any state thereof or the District of Columbia;
- an estate whose income is subject to U.S. federal income taxation regardless of its source; or
- a trust that (1) is subject to the primary supervision of a court within the United States and the control of one or more U.S. persons for all substantial decisions or (2) has a valid election in effect under applicable Treasury Regulations to be treated as a U.S. person.

# U.S. Holders Subject to Special U.S. Federal Income Tax Rules Not Addressed

This summary does not address the U.S. federal income tax considerations applicable to U.S. Holders that are subject to special provisions under the Code, including U.S. Holders that: (a) are tax-exempt organizations, qualified retirement plans, individual retirement accounts, or other tax-deferred accounts; (b) are financial institutions, underwriters, insurance companies, real estate investment trusts, or regulated investment companies; (c) are brokers or dealers in securities or currencies or U.S. Holders that are traders in securities that elect to apply a mark-to-market accounting method; (d) have a "functional currency" other than the U.S. dollar; (e) own Units, Common Shares, Warrants or Warrant Shares in connection with the exercise of employee stock options or otherwise as compensation for services; (g) hold Units, Common Shares, Warrants or Warrant Shares in connection with the exercise of employee stock options or otherwise as compensation for services; (g) hold Units, Common Shares, Warrants or Warrant Shares other than as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment purposes); (h) are partnerships and other pass-through entities (and investors in such partnerships and entities); (i) are required to accelerate the recognition of any item of gross income with respect to Common Shares, Warrants or Warrant Shares as a result of such income being recognized on an applicable financial statement; or (j) own, have owned or will own (directly, indirectly, or by attribution) 10% or more of the total combined voting power or value of the Company's outstanding shares. This summary also does not address the U.S. federal income tax considerations applicable to U.S. Holders who are (a) U.S. expatriates or former long-term residents of the U.S., or (b) subject to taxing jurisdictions other than, or in addition to, the United States. U.S. Holders that are subject to special provisions under the Code, including U.S. Holders described immediately above, shoul

If an entity or arrangement that is classified as a partnership for U.S. federal income tax purposes holds Units, Common Shares, Warrants or Warrant Shares, the U.S. federal income tax consequences to such entity or arrangement and the owners of such entity or arrangement generally will depend on the activities of such entity or arrangement and the status of such owners. This summary does not address the tax consequences to any such entity or arrangement or owner. Owners of entities or arrangements that are classified as partnerships for U.S. federal income tax purposes should consult their own tax advisor regarding the U.S. federal income tax consequences arising from and relating to the acquisition, ownership, and disposition of Units, Common Shares, Warrants and Warrant Shares.

## U.S. Federal Income Tax Consequences of the Acquisition of Units

For U.S. federal income tax purposes, the acquisition by a U.S. Holder of a Unit will be treated as the acquisition of one Common Share and one Warrant. The purchase price for each Unit will be allocated between these two components in proportion to their relative fair market values at the time the Unit is purchased by the U.S. Holder. This allocation of the purchase price for each Unit will establish a U.S. Holder's initial tax basis for U.S. federal income tax purposes in the Common Share and Warrant that comprise each Unit.

For this purpose, the Company will allocate US \$1.32 of the purchase price for the Unit to the Common Share and US\$2.08 of the purchase price for each Unit to the Warrant. However, the IRS will not be bound by such allocation of the purchase price for the Units, and therefore, the IRS or a U.S. court may not respect the allocation set forth above. Each U.S. Holder should consult its own tax advisor regarding the allocation of the purchase price for the Units.

## **Passive Foreign Investment Company Rules**

If the Company is considered a "passive foreign investment company" within the meaning of Section 1297 of the Code (a "PFIC") at any time during a U.S. Holder's holding period, the following sections will generally describe the potentially adverse U.S. federal income tax consequences to U.S. Holders of the acquisition, ownership, and disposition of Units, Common Shares, Warrants or Warrant Shares.

The Company believes that it was classified as a PFIC for the tax year ended December 31, 2018, and based on current business plans and financial expectations, the Company expects that it may be a PFIC for the tax year ended December 31, 2019 and may be a PFIC in future tax years. No opinion of legal counsel or ruling from the IRS concerning the status of the Company as a PFIC has been obtained or is currently planned to be requested. The determination of whether any corporation was, or will be, a PFIC for a tax year depends, in part, on the application of complex U.S. federal income tax rules, which are subject to differing interpretations. In addition, whether any corporation will be a PFIC for any tax year depends on the assets and income of such corporation over the course of each such tax year and, as a result, the Company's PFIC status for the current year and future years cannot be predicted with certainty as of the date of this document. Accordingly, there can be no assurance that the IRS will not challenge any PFIC determination made by the Company (or by one of the Company's subsidiaries). Each U.S. Holder should consult its own tax advisor regarding the Company's status as a PFIC and the PFIC status of each non-U.S. subsidiary of the Company.

In any year in which the Company is classified as a PFIC, a U.S. Holder will be required to file an annual report with the IRS containing such information as Treasury Regulations and/or other IRS guidance may require. In addition to penalties, a failure to satisfy such reporting requirements may result in an extension of the time period during which the IRS can assess a tax. U.S. Holders should consult their own tax advisors regarding the requirements of filing such information returns under these rules, including the requirement to file an IRS Form 8621.

The Company generally will be a PFIC for any tax year in which (a) 75% or more of the gross income of the Company for such tax year is passive income (the "PFIC income test") or (b) 50% or more of the value of the assets of the Company either produce passive income or are held for the production of passive income, based on the quarterly average of the fair market value of such assets (the "PFIC asset test"). "Gross income" generally includes sales revenues less the cost of goods sold, plus income from investments and from incidental or outside operations or sources, and "passive income" generally includes, for example, dividends, interest, certain rents and royalties, certain gains from the sale of stock and securities, and certain gains from commodities transactions.

For purposes of the PFIC income test and PFIC asset test described above, if the Company owns, directly or indirectly, 25% or more of the total value of the outstanding shares of another corporation, the Company will be treated as if it (a) held a proportionate share of the assets of such other corporation and (b) received directly a proportionate share of the income of such other corporation. In addition, for purposes of the PFIC income test and PFIC asset test described above, "passive income" does not include any interest, dividends, rents, or royalties that are received or accrued by the Company from a "related person" (as defined in Section 954(d) (3) of the Code), to the extent such items are properly allocable to the income of such related person that is not passive income.

Under certain attribution rules, if the Company is a PFIC, U.S. Holders will be deemed to own their proportionate share of any of the Company's subsidiaries which is also a PFIC (a "Subsidiary PFIC"), and will generally be subject to U.S. federal income tax under the "Default PFIC Rules Under Section 1291 of the Code" discussed below on their proportionate share of any (i) distribution on the shares of a Subsidiary PFIC and (ii) disposition or deemed disposition of shares of a Subsidiary PFIC, both as if such U.S. Holders directly held the shares of such Subsidiary PFIC. Accordingly, U.S. Holders should be aware that they could be subject to tax under the PFIC rules even if no distributions are received and no redemptions or other dispositions of Units, Common Shares, Warrants or Warrant Shares are made. In addition, U.S. Holders may be subject to U.S. federal income tax on any indirect gain realized on the stock of a Subsidiary PFIC on the sale or disposition of Units, Common Shares, Warrants or Warrant Shares.

#### Default PFIC Rules Under Section 1291 of the Code

If the Company is a PFIC, the U.S. federal income tax consequences to a U.S. Holder of the purchase of Units and the acquisition, ownership, and disposition of Common Shares, Warrants and Warrant Shares will depend on whether such U.S. Holder makes a "qualified electing fund" or "QEF" election (a "QEF Election") or makes a mark-to-market election under Section 1296 of the Code (a "Mark-to-Market Election") with respect to Common Shares or Warrant Shares. A U.S. Holder that does not make either a QEF Election or a Mark-to-Market Election (a "Non-Electing U.S. Holder") will be taxable as described below.

A Non-Electing U.S. Holder will be subject to the rules of Section 1291 of the Code with respect to (a) any gain recognized on the sale or other taxable disposition of Common Shares, Warrants and Warrant Shares and (b) any excess distribution received on the Common Shares and Warrant Shares. A distribution generally will be an "excess distribution" to the extent that such distribution (together with all other distributions received in the current tax year) exceeds 125% of the average distributions received during the three preceding tax years (or during a U.S. Holder's holding period for the Common Shares and Warrant Shares, if shorter).

Under Section 1291 of the Code, any gain recognized on the sale or other taxable disposition of Common Shares, Warrants and Warrant Shares of a PFIC (including an indirect disposition of shares of a Subsidiary PFIC), and any excess distribution received on such Common Shares and Warrant Shares (or a distribution by a Subsidiary PFIC to its shareholder that is deemed to be received by a U.S. Holder) must be rateably allocated to each day in a Non-Electing U.S. Holder's holding period for the Common Shares or Warrant Shares. The amount of any such gain or excess distribution allocated to the tax year of disposition or distribution of the excess distribution and to years before the entity became a PFIC, if any, would be taxed as ordinary income (and not eligible for certain preferential tax rates, as discussed below). The amounts allocated to any other tax year would be subject to U.S. federal income tax at the highest tax rate applicable to ordinary income in each such year, and an interest charge would be imposed on the tax liability for each such year, calculated as if such tax liability had been due in each such year. A Non-Electing U.S. Holder that is not a corporation must treat any such interest paid as "personal interest," which is not deductible.

If the Company is a PFIC for any tax year during which a Non-Electing U.S. Holder holds Common Shares, Warrant Shares or Warrants, it will continue to be treated as a PFIC with respect to such Non-Electing U.S. Holder, regardless of whether it ceases to be a PFIC in one or more subsequent tax years. If the Company ceases to be a PFIC, a Non-Electing U.S. Holder may terminate this deemed PFIC status with respect to Common Shares and Warrant Shares by electing to recognize gain (which will be taxed under the rules of Section 1291 of the Code as discussed above) as if such Common Shares and Warrant Shares were sold on the last day of the last tax year for which the Company was a PFIC. No such election, however, may be made with respect to the Warrants.

Under proposed Treasury Regulations, if a U.S. holder has an option, warrant, or other right to acquire stock of a PFIC (such as the Warrants), such option, warrant or right is considered to be PFIC stock subject to the default rules of Section 1291 of the Code. Under rules described below, the holding period for the Warrant Shares will begin on the date a U.S. Holder acquires the Units. This will impact the availability of the QEF Election and Mark-to-Market Election with respect to the Warrant Shares. Thus, a U.S. Holder will have to account for Warrant Shares and Common Shares under the PFIC rules and the applicable elections differently.

# **QEF** Election

A U.S. Holder that makes a QEF Election for the first tax year in which its holding period of its Common Shares begins generally will not be subject to the rules of Section 1291 of the Code discussed above with respect to its Common Shares. However, a U.S. Holder that makes a QEF Election will be subject to U.S. federal income tax on such U.S. Holder's pro rata share of (a) the Company's net capital gain, which will be taxed as long-term capital gain to such U.S. Holder, and (b) the Company's ordinary earnings, which will be taxed as ordinary income to such U.S. Holder. Generally, "net capital gain" is the excess of (a) net long-term capital gain over (b) net short-term capital loss, and "ordinary earnings" are the excess of (a) "earnings and profits" over (b) net capital gain. A U.S. Holder that makes a QEF Election will be subject to U.S. federal income tax on such amounts for each tax year in which the Company is a PFIC, regardless of whether such amounts are actually distributed to such U.S. Holder by the Company. However, for any tax year in which the Company is a PFIC and has no net income or gain, U.S. Holders that have made a QEF Election would not have any income inclusions as a result of the QEF Election. If a U.S. Holder that made a QEF Election has an income inclusion, such a U.S. Holder may, subject to certain limitations, elect to defer payment of current U.S. federal income tax on such amounts, subject to an interest charge. If such U.S. Holder is not a corporation, any such interest paid will be treated as "personal interest," which is not deductible.

A U.S. Holder that makes a timely QEF Election generally (a) may receive a tax-free distribution from the Company to the extent that such distribution represents "earnings and profits" that were previously included in income by the U.S. Holder because of such QEF Election and (b) will adjust such U.S. Holder's tax basis in the Common Shares to reflect the amount included in income or allowed as a tax-free distribution because of such QEF Election. In addition, a U.S. Holder that makes a QEF Election generally will recognize capital gain or loss on the sale or other taxable disposition of Common Shares.

The procedure for making a QEF Election, and the U.S. federal income tax consequences of making a QEF Election, will depend on whether such QEF Election is timely. A QEF Election will be treated as "timely" for purposes of avoiding the default PFIC rules discussed above if such QEF Election is made for the first year in the U.S. Holder's holding period for the Common Shares in which the Company was a PFIC. A U.S. Holder may make a timely QEF Election by filing the appropriate QEF Election documents at the time such U.S. Holder files a U.S. federal income tax return for such year.

A QEF Election will apply to the tax year for which such QEF Election is made and to all subsequent tax years, unless such QEF Election is invalidated or terminated or the IRS consents to revocation of such QEF Election. If a U.S. Holder makes a QEF Election and, in a subsequent tax year, the Company ceases to be a PFIC, the QEF Election will remain in effect (although it will not be applicable) during those tax years in which the Company is not a PFIC. Accordingly, if the Company becomes a PFIC in another subsequent tax year, the QEF Election will be effective and the U.S. Holder will be subject to the QEF rules described above during any subsequent tax year in which the Company qualifies as a PFIC.

As discussed above, under proposed Treasury Regulations, if a U.S. holder has an option, warrant or other right to acquire stock of a PFIC (such as the Warrants), such option, warrant or right is considered to be PFIC stock subject to the default rules of Section 1291 of the Code. However, a U.S. Holder of an option, warrant or other right to acquire stock of a PFIC may not make a QEF Election that will apply to the option, warrant or other right to acquire PFIC stock. In addition, under proposed Treasury Regulations, if a U.S. Holder holds an option, warrant or other right to acquire stock of a PFIC, the holding period with respect to shares of stock of the PFIC acquired upon exercise of such option, warrant or other right will include the period that the option, warrant or other right was held.

Consequently, under the proposed Treasury Regulations, if a U.S. Holder of Common Shares makes a QEF Election, such election generally will not be treated as a timely QEF Election with respect to Warrant Shares and the rules of Section 1291 of the Code discussed above will continue to apply with respect to such U.S. Holder's Warrant Shares. However, a U.S. Holder of Warrant Shares should be eligible to make a timely QEF Election if such U.S. Holder elects in the tax year in which such Warrant Shares are received to recognize gain (which will be taxed under the rules of Section 1291 of the Code discussed above) as if such Warrant Shares were sold for fair market value on the date such U.S. Holder acquired them by exercising the corresponding Warrant. In addition, gain recognized on the sale or other taxable disposition (other than by exercise) of the Warrants by a U.S. Holder will be subject to the rules of Section 1291 of the Code discussed above. Each U.S. Holder should consult its own tax advisor regarding the application of the PFIC rules to the Units, Common Shares, Warrants, and Warrant Shares.

U.S. Holders should be aware that there can be no assurances that the Company will satisfy the record keeping requirements that apply to a QEF, or that the Company will supply U.S. Holders with a PFIC Annual Information Statement or other information that such U.S. Holders are required to report under the QEF rules, in the event that the Company is a PFIC. Thus, U.S. Holders may not be able to make a QEF Election with respect to their Common Shares or, assuming the election to recognize gain upon exercise described above is made, Warrant Shares. Each U.S. Holder should consult its own tax advisors regarding the availability of, and procedure for making, a QEF Election.

A U.S. Holder makes a QEF Election by attaching a completed IRS Form 8621, including a PFIC Annual Information Statement, to a timely filed U.S. federal income tax return. However, if the Company does not provide the required information with regard to the Company or any of its Subsidiary PFICs, U.S. Holders will not be able to make a QEF Election for such entity and will continue to be subject to the rules of Section 1291 of the Code discussed above that apply to Non-Electing U.S. Holders with respect to the taxation of gains and excess distributions.

# Mark-to-Market Election

A U.S. Holder may make a Mark-to-Market Election with respect to Common Shares and Warrant Shares only if the Common Shares and Warrant Shares are marketable stock. The Common Shares and Warrant Shares generally will be "marketable stock" if the Common Shares and Warrant Shares are regularly traded on (a) a national securities exchange that is registered with the SEC,(b) the national market system established pursuant to Section 11A of the U.S. Exchange Act or (c) a foreign securities exchange that is regulated or supervised by a governmental authority of the country in which the market is located, provided that (i) such foreign exchange has trading volume, listing, financial disclosure, and other requirements and the laws of the country in which such foreign exchange is located, together with the rules of such foreign exchange, ensure that such requirements are actually enforced and (ii) the rules of such foreign exchange ensure active trading of listed stocks. If such stock is traded on such a qualified exchange or other market, such stock generally will be considered "regularly traded" for any calendar year during which such stock is traded, other than in *de minimis* quantities, on at least 15 days during each calendar quarter. Provided that the Common Shares and Warrant Shares are expected to be marketable stock. The Company believes that its Common Shares were "regularly traded" in the fourth calendar quarter of 2018 and expects that the Common Shares should be "regularly traded" in the first calendar quarter of 2019. However, there can be no assurance that the Common Shares will be "regularly traded" in subsequent calendar quarters. U.S. Holders should consult their own tax advisors regarding the marketable stock rules.

A U.S. Holder that makes a Mark-to-Market Election with respect to its Common Shares generally will not be subject to the rules of Section 1291 of the Code discussed above with respect to such Common Shares. However, if a U.S. Holder does not make a Mark-to-Market Election beginning in the first tax year of such U.S. Holder's holding period for the Common Shares and such U.S. Holder has not made a timely QEF Election, the rules of Section 1291 of the Code discussed above will apply to certain dispositions of, and distributions on, the Common Shares.

Any Mark-to-Market Election made by a U.S. Holder for the Common Shares will also apply to such U.S. Holder's Warrant Shares. As a result, if a Mark-to-Market Election has been made by a U.S. Holder with respect to Common Shares, any Warrant Shares received will automatically be marked-to-market in the year of exercise. Because, under the proposed Treasury Regulations, a U.S. Holder's holding period for Warrant Shares includes the period during which such U.S. Holder held the Warrants, a U.S. Holder will be treated as making a Mark-to-Market Election with respect to its Warrant Shares after the beginning of such U.S. Holder's holding period for the Warrant Shares unless the Warrant Shares are acquired in the same tax year as the year in which the U.S. Holder acquired its Units. Consequently, the default rules under Section 1291 described above generally will apply to the mark-to-market gain realized in the tax year in which Warrant Shares are received. However, the general mark-to-market rules will apply to subsequent tax years.

A U.S. Holder that makes a Mark-to-Market Election will include in ordinary income, for each tax year in which the Company is a PFIC, an amount equal to the excess, if any, of (a) the fair market value of the Common Shares and any Warrant Shares, as of the close of such tax year over (b) such U.S. Holder's tax basis in the Common Shares and any Warrant Shares. A U.S. Holder that makes a Mark-to-Market Election will be allowed a deduction in an amount equal to the excess, if any, of (i) such U.S. Holder's adjusted tax basis in the Common Shares and any Warrant Shares, over (ii) the fair market value of such Common Shares and any Warrant Shares (but only to the extent of the net amount of previously included income as a result of the Mark-to-Market Election for prior tax years).

A U.S. Holder that makes a Mark-to-Market Election generally also will adjust such U.S. Holder's tax basis in the Common Shares and Warrant Shares to reflect the amount included in gross income or allowed as a deduction because of such Mark-to-Market Election. In addition, upon a sale or other taxable disposition of Common Shares and Warrant Shares, a U.S. Holder that makes a Mark-to-Market Election will recognize ordinary income or ordinary loss (not to exceed the excess, if any, of (a) the amount included in ordinary income because of such Mark-to-Market Election for prior tax years over(b) the amount allowed as a deduction because of such Mark-to-Market Election for prior tax years).

A U.S. Holder makes a Mark-to-Market Election by attaching a completed IRS Form 8621 to a timely filed U.S. federal income tax return. A timely Mark-to-Market Election applies to the tax year in which such Mark-to-Market Election is made and to each subsequent tax year, unless the Common Shares and Warrant Shares cease to be "marketable stock" or the IRS consents to revocation of such election. Each U.S. Holder should consult its own tax advisor regarding the availability of, and procedure for making, a Mark-to-Market Election.

Although a U.S. Holder may be eligible to make a Mark-to-Market Election with respect to the Common Shares and Warrant Shares, no such election may be made with respect to the stock of any Subsidiary PFIC that a U.S. Holder is treated as owning because such stock is not marketable. Hence, the Mark-to-Market Election will not be effective to eliminate the interest charge and other income inclusion rules described above with respect to deemed dispositions of Subsidiary PFIC stock or distributions from a Subsidiary PFIC to its shareholder.

# Other PFIC Rules

Under Section 1291(f) of the Code, the IRS has issued proposed Treasury Regulations that, subject to certain exceptions, would cause a U.S. Holder that had not made a timely QEF Election to recognize gain (but not loss) upon certain transfers of Common Shares and Warrant Shares that would otherwise be tax-deferred (e.g., gifts and exchanges pursuant to corporate reorganizations). However, the specific U.S. federal income tax consequences to a U.S. Holder may vary based on the manner in which Common Shares, Warrants, or Warrant Shares are transferred.

If finalized in their current form, the proposed Treasury Regulations applicable to PFICs would be effective for transactions occurring on or after April 1, 1992. Because the proposed Treasury Regulations have not yet been adopted in final form, they are not currently effective, and there is no assurance that they will be adopted in the form and with the effective date proposed. Nevertheless, the IRS has announced that, in the absence of final Treasury Regulations, taxpayers may apply reasonable interpretations of the Code provisions applicable to PFICs and that it considers the rules set forth in the proposed Treasury Regulations to be reasonable interpretations of those Code provisions. The PFIC rules are complex, and the implementation of certain aspects of the PFIC rules requires the issuance of Treasury Regulations which in many instances have not been promulgated and which, when promulgated, may have retroactive effect. U.S. Holders should consult their own tax advisors about the potential applicability of the proposed Treasury Regulations.

Certain additional adverse rules will apply with respect to a U.S. Holder if the Company is a PFIC, regardless of whether such U.S. Holder makes a QEF Election. For example under Section 1298(b)(6) of the Code, a U.S. Holder that uses Common Shares, Warrants or Warrant Shares as security for a loan will, except as may be provided in Treasury Regulations, be treated as having made a taxable disposition of such Common Shares, Warrants or Warrant Shares.

In addition, a U.S. Holder who acquires Common Shares, Warrants or Warrant Shares from a decedent will not receive a "step up" in tax basis of such Common Shares, Warrants or Warrants or Warrant Shares to fair market value.

Special rules also apply to the amount of foreign tax credit that a U.S. Holder may claim on a distribution from a PFIC. Subject to such special rules, foreign taxes paid with respect to any distribution in respect of stock in a PFIC are generally eligible for the foreign tax credit. The rules relating to distributions by a PFIC and their eligibility for the foreign tax credit are complicated, and a U.S. Holder should consult with their own tax advisor regarding the availability of the foreign tax credit with respect to distributions by a PFIC.

The PFIC rules are complex, and each U.S. Holder should consult its own tax advisor regarding the PFIC rules (including the applicability and advisability of a QEF Election and Mark-to-Market Election) and how the PFIC rules may affect the U.S. federal income tax consequences of the acquisition, ownership, and disposition of Common Shares, Warrants and Warrant Shares.

#### U.S. Federal Income Tax Consequences of the Exercise and Disposition of Warrants

The following discussion describes the general rules applicable to the ownership and disposition of the Warrants but is subject in its entirety to the special rules described above under the heading "Passive Foreign Investment Company Rules."

# Exercise of Warrants

A U.S. Holder should not recognize gain or loss on the exercise of a Warrant and related receipt of a Warrant Share (unless cash is received in lieu of the issuance of a fractional Warrant Share). A U.S. Holder's initial tax basis in the Warrant Share received on the exercise of a Warrant should be equal to the sum of (a) such U.S. Holder's tax basis in such Warrant plus (b) the exercise price paid by such U.S. Holder on the exercise of such Warrant. If, as anticipated, the Company is a PFIC, a U.S. Holder's holding period for the Warrant Share will begin on the date on which such U.S. Holder acquired its Units.

## Disposition of Warrants

A U.S. Holder will recognize gain or loss on the sale or other taxable disposition of a Warrant in an amount equal to the difference, if any, between (a) the amount of cash plus the fair market value of any property received and (b) such U.S. Holder's tax basis in the Warrant sold or otherwise disposed of. Subject to the PFIC rules discussed above, any such gain or loss generally will be a capital gain or loss, which will be long-term capital gain or loss if the Warrant is held for more than one year. Deductions for capital losses are subject to complex limitations under the Code.

## **Expiration of Warrants Without Exercise**

Upon the lapse or expiration of a Warrant, a U.S. Holder will recognize a loss in an amount equal to such U.S. Holder's tax basis in the Warrant. Any such loss generally will be a capital loss and will be long-term capital loss if the Warrants are held for more than one year. Deductions for capital losses are subject to complex limitations under the Code.

# Certain Adjustments to the Warrants

Under Section 305 of the Code, an adjustment to the number of Warrant Shares that will be issued on the exercise of the Warrants, or an adjustment to the exercise price of the Warrants, may be treated as a constructive distribution to a U.S. Holder of the Warrants if, and to the extent that, such adjustment has the effect of increasing such U.S. Holder's proportionate interest in the "earnings and profits" or the Company's assets, depending on the circumstances of such adjustment (for example, if such adjustment is to compensate for a distribution of cash or other property to the shareholders). Adjustments to the exercise price of Warrants made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing dilution of the interest of the holders of the Warrants should generally not be considered to result in a constructive distribution. Any such constructive distribution would be taxable whether or not there is an actual distribution of cash or other property. (See more detailed discussion of the rules applicable to distributions made by the Company at "Distributions on Common Shares and Warrant Shares" below).

General Rules Applicable to U.S. Federal Income Tax Consequences of the Acquisition, Ownership, and Disposition of Common Shares and Warrant Shares

The following discussion describes the general rules applicable to the ownership and disposition of the Common Shares and Warrant Shares but is subject in its entirety to the special rules described above under the heading "Passive Foreign Investment Company Rules."

## Distributions on Common Shares and Warrant Shares

A U.S. Holder that receives a distribution, including a constructive distribution, with respect to a Common Share or Warrant Share (as well as any constructive distribution on a Warrant as described above) will be required to include the amount of such distribution in gross income as a dividend (without reduction for any Canadian income tax withheld from such distribution) to the extent of the Company's current and accumulated "earnings and profits", as computed under U.S. federal income tax principles. A dividend generally will be taxed to a U.S. Holder at ordinary income tax rates if the Company is a PFIC for the tax year of such distribution or the preceding tax year. To the extent that a distribution exceeds the current and accumulated "earnings and profits" of the Company, such distribution will be treated first as a tax-free return of capital to the extent of a U.S. Holder's tax basis in the Common Shares or Warrant Shares and thereafter as gain from the sale or exchange of such Common Shares or Warrant Shares (see "Sale or Other Taxable Disposition of Common Shares and/or Warrant Shares" below). However, the Company may not maintain the calculations of earnings and profits in accordance with U.S. federal income tax principles, and each U.S. Holder may be required to assume that any distribution by the Company with respect to the Common Shares or Warrant Shares will constitute ordinary dividend income. Dividends received on Common Shares or Warrant Shares generally will not be eligible for the "dividends received deduction" generally applicable to corporations. Subject to applicable limitations and provided the Company is eligible for the benefits of the Convention Between Canada and the United States of America with Respect to Taxes on Income and on Capital, signed September 26, 1980, as amended, or the Common Shares are readily tradable on a United States securities market, dividends paid by the Company to non-corporate U.S. Holders, including individuals, generally will be eligible for the preferential

# Sale or Other Taxable Disposition of Common Shares and/or Warrant Shares

Upon the sale or other taxable disposition of Common Shares or Warrant Shares, a U.S. Holder generally will recognize capital gain or loss in an amount equal to the difference between (a) the amount of cash plus the fair market value of any property received and(b) such U.S. Holder's tax basis in such Common Shares or Warrant Shares sold or otherwise disposed of. Gain or loss recognized on such sale or other taxable disposition generally will be long-term capital gain or loss if, at the time of the sale or other taxable disposition, the Common Shares or Warrant Shares have been held for more than one year. Preferential tax rates may apply to long-term capital gain of a U.S. Holder that is an individual, estate, or trust. There are no preferential tax rates for long-term capital gain of a U.S. Holder that is a corporation. Deductions for capital losses are subject to significant limitations under the Code.

## **Additional Tax Considerations**

#### Receipt of Foreign Currency

The amount of any distribution paid to a U.S. Holder in foreign currency or on the sale, exchange or other taxable disposition of Common Shares, Warrants or Warrant Shares generally will be equal to the U.S. dollar value of such foreign currency based on the exchange rate applicable on the date of receipt (regardless of whether such foreign currency is converted into U.S. dollars at that time). If the foreign currency received is not converted into U.S. dollars on the date of receipt, a U.S. Holder will have a tax basis in the foreign currency equal to its U.S. dollar value on the date of receipt. Any U.S. Holder who receives payment in foreign currency and engages in a subsequent conversion or other disposition of the foreign currency may have a foreign currency exchange gain or loss that would be treated as ordinary income or loss, and generally will be U.S. source income or loss for foreign tax credit purposes. Different rules apply to U.S. Holders who use the accrual method of tax accounting. Each U.S. Holder should consult its own U.S. tax advisor regarding the U.S. federal income tax consequences of receiving, owning, and disposing of foreign currency.

# Foreign Tax Credit

Subject to the PFIC rules discussed above, a U.S. Holder that pays (whether directly or through withholding) Canadian income tax with respect to dividends paid on the Common Shares or Warrant Shares (or with respect to any constructive dividend on the Warrants) generally will be entitled, at the election of such U.S. Holder, to receive either a deduction or a credit for such Canadian income tax paid. Generally, a credit will reduce a U.S. Holder's U.S. federal income tax liability on a dollar-for-dollar basis, whereas a deduction will reduce a U.S. Holder's income subject to U.S. federal income tax. This election is made on a year-by-year basis and applies to all foreign taxes paid or accrued (whether directly or through withholding) by a U.S. Holder during a year.

Complex limitations apply to the foreign tax credit, including the general limitation that the credit cannot exceed the proportionate share of a U.S. Holder's U.S. federal income tax liability that such U.S. Holder's "foreign source" taxable income bears to such U.S. Holder's worldwide taxable income. In applying this limitation, a U.S. Holder's various items of income and deduction must be classified, under complex rules, as either "foreign source" or "U.S. source." Generally, dividends paid by a foreign corporation (including constructive dividends) should be treated as foreign source for this purpose, and gains recognized on the sale of stock of a foreign corporation by a U.S. Holder should be treated as U.S. source for this purpose, except as otherwise provided in an applicable income tax treaty, and if an election is properly made under the Code. However, the amount of a distribution with respect to the Common Shares, Warrant Shares or Warrants that is treated as a "dividend" may be lower for U.S. federal income tax purposes than it is for Canadian federal income tax purposes, resulting in a reduced foreign tax credit allowance to a U.S. Holder. In addition, this limitation is calculated separately with respect to specific categories of income. The foreign tax credit rules are complex, and each U.S. Holder should consult its own tax advisor regarding the foreign tax credit rules.

## Additional Tax on Passive Income

Certain U.S. Holders that are individuals, estates or trusts (other than trusts that are exempt from tax) will be subject to a 3.8% tax on all or a portion of their "net investment income," which includes dividends on the Common Shares and Warrant Shares and net gains from the disposition of the Common Shares, Warrants and Warrant Shares. Further, excess distributions treated as dividends, gains treated as excess distributions, and mark-to-market inclusions and deductions under the PFIC rules discussed above are all included in the calculation of net investment income.

Treasury Regulations provide, subject to the election described in the following paragraph, that solely for purposes of this additional tax, distributions of previously taxed income will be treated as dividends and included in net investment income subject to the additional 3.8% tax. Additionally, to determine the amount of any capital gain from the sale or other taxable disposition of Common Shares or Warrant Shares that will be subject to the additional tax on net investment income, a U.S. Holder who has made a QEF Election will be required to recalculate its basis in the Common Shares or Warrant Shares by excluding QEF basis adjustments.

Alternatively, a U.S. Holder may make an election which will be effective with respect to all interests in PFIC for which a QEF Election has been made and which is held in that year or acquired in future years. Under this election, a U.S. Holder pays the additional 3.8% tax on QEF income inclusions and on gains calculated after giving effect to related tax basis adjustments. U.S. Holders that are individuals, estates or such trusts should consult their own tax advisors regarding the applicability of this tax to any of their income or gains in respect of the Common Shares, Warrants and Warrant Shares and the advisability of making this election.

## Information Reporting; Backup Withholding Tax

Under U.S. federal income tax laws certain categories of U.S. Holders must file information returns with respect to their investment in, or involvement in, a foreign corporation. For example, U.S. return disclosure obligations (and related penalties) are imposed on U.S. Holders that hold certain specified foreign financial assets in excess of certain threshold amounts. The definition of specified foreign financial assets includes not only financial accounts maintained in foreign financial institutions, but also, unless held in accounts maintained by a financial institution, any stock or security issued by a non-U.S. person. U. S. Holders may be subject to these reporting requirements unless their Common Shares, Warrants, and Warrant Shares are held in an account at certain financial institutions. Penalties for failure to file certain of these information returns are substantial. U.S. Holders should consult their own tax advisors regarding the requirements of filing information returns, including the requirement to file IRS Form 8938.

Payments made within the U.S., or by a U.S. payor or U.S. middleman, of dividends on, and proceeds arising from the sale or other taxable disposition of the Common Shares, Warrants and Warrant Shares generally may be subject to information reporting and backup withholding tax, currently at the rate of 24%, if a U.S. Holder (a) fails to furnish its correct U.S. taxpayer identification number (generally on Form W-9), (b) furnishes an incorrect U.S. taxpayer identification number, (c) is notified by the IRS that such U.S. Holder has previously failed to properly report items subject to backup withholding tax, or (d) fails to certify, under penalty of perjury, that it has furnished its correct U.S. taxpayer identification number and that the IRS has not notified such U.S. Holder that it is subject to backup withholding tax. However, certain exempt persons, such as U.S. Holders that are corporations, generally are excluded from these information reporting and backup withholding tax rules. Any amounts withheld under the U.S. backup withholding tax rules will be allowed as a credit against a U.S. Holder's U.S. federal income tax liability, if any, or will be refunded, if such U.S. Holder furnishes required information to the IRS in a timely manner.

The discussion of reporting requirements set forth above is not intended to constitute a complete description of all reporting requirements that may apply to a U.S. Holder. A failure to satisfy certain reporting requirements may result in an extension of the time period during which the IRS can assess a tax and, under certain circumstances, such an extension may apply to assessments of amounts unrelated to any unsatisfied reporting requirement. Each U.S. Holder should consult its own tax advisors regarding the information reporting and backup withholding rules.

THE ABOVE SUMMARY IS NOT INTENDED TO CONSTITUTE A COMPLETE ANALYSIS OF ALL TAX CONSIDERATIONS APPLICABLE TO U.S. HOLDERS WITH RESPECT TO THE ACQUISITION, OWNERSHIP, AND DISPOSITION OF COMMON SHARES, WARRANTS AND WARRANT SHARES. U.S. HOLDERS SHOULD CONSULT THEIR OWN TAX ADVISORS AS TO THE TAX CONSIDERATIONS APPLICABLE TO THEM IN THEIR OWN PARTICULAR CIRCUMSTANCES.

# TRANSFER AGENT AND REGISTRAR

The transfer agent and registrar for the Common Shares in Canada is Computershare Investor Services Inc., at its principal office in Toronto, Ontario, Canada. The transfer agent and registrar for the Common Shares in the United States is Computershare Trust Company, N.A., at its principal office in Louisville, Kentucky.

## **EXPERTS**

The Company's financial statements as at December 31, 2018 incorporated by reference in this short form prospectus have been audited by BDO Canada LLP, independent auditors, as set forth in their report incorporated by reference in this short form prospectus. BDO Canada LLP is independent with respect to the Company within the meaning of the Rules of Professional Conduct of the Institute of Chartered Professional Accountants of Ontario.

# LEGAL MATTERS

Certain legal matters relating to the Offering and the validity of the securities offered by this short form prospectus are being passed upon for the Company by Borden Ladner Gervais LLP, Toronto, Ontario, the Company's Canadian counsel, and Dorsey & Whitney LLP, the Company's U.S. counsel, and on behalf of the Agent by Baker & McKenzie LLP.

As of the date hereof, the "designated professionals" (as such term is defined in Form 51-102F2 – Annual Information Form) of each of Borden Ladner Gervais LLP and Baker & McKenzie LLP, respectively, beneficially own, directly or indirectly, less than 1% of the Company's issued and outstanding securities.

#### PART II

# INFORMATION NOT REQUIRED TO BE DELIVERED TO OFFEREES OR PURCHASERS

## **Indemnification of Directors and Officers**

Under the Business Corporations Act (Ontario), the Registrant may indemnify a director or officer of the Registrant, a former director or officer of the Registrant or another individual who acts or acted at the Registrant's request as a director or officer, or an individual acting in a similar capacity, of another entity (each of the foregoing, an "individual"), against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of that association with the Registrant or other entity, on the condition that (i) such individual acted honestly and in good faith with a view to the best interests of the Registrant or, as the case may be, to the best interests of the other entity for which the individual acted as a director or officer or in a similar capacity at the Registrant's request; and (ii) if the matter is a criminal or administrative action or proceeding that is enforced by a monetary penalty, the Registrant shall not indemnify the individual unless the individual had reasonable grounds for believing that his or her conduct was lawful.

Further, the Registrant may, with the approval of a court, indemnify an individual in respect of an action by or on behalf of the Registrant or other entity to obtain a judgment in its favor, to which the individual is made a party because of the individual's association with the Registrant or other entity as a director or officer, a former director or officer, an individual who acts or acted at the Registrant's request as a director or officer, or an individual acting in a similar capacity, against all costs, charges and expenses reasonably incurred by the individual in connection with such action, if the individual fulfills the conditions in (i) and (ii) above. Such individuals are entitled to indemnification from the Registrant in respect of all costs, charges and expenses reasonably incurred by the individual in connection with the defense of any civil, criminal, administrative, investigative or other proceeding to which the individual is subject because of the individual's association with the Registrant or other entity as described above, provided the individual seeking an indemnity: (A) was not judged by a court or other competent authority to have committed any fault or omitted to do anything that the individual ought to have done; and (B) fulfills the conditions in (i) and (ii) above.

The by-laws of the Registrant provide that, Subject to the Business Corporations Act (Ontario), the Registrant shall indemnify a director or officer of the Registrant, a former director or officer of the Registrant or another individual who acts or acted at the Registrant's request as a director or officer, or an individual acting in a similar capacity, of another entity, and such person's heirs and legal representatives, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of that association with the Registrant or other entity, if: (i) the individual acted honestly and in good faith with a view to the best interests of the Registrant or, as the case may be, to the best interest of the other entity for which the individual acted as a director or officer or in a similar capacity at the Registrant's request and (ii) in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, the person had reasonable grounds for believing that the individual's conduct was lawful.

The Registrant maintains directors' and officers' liability insurance which insures directors and officers for losses as a result of claims against the directors and officers of the Registrant in their capacity as directors and officers and also reimburses the Registrant for payments made pursuant to the indemnity provisions under the by-laws of the Registrant and the *Business Corporations Act* (Ontario).

\* \* \*

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, may be permitted to directors, officers or persons controlling the Registrant pursuant to the foregoing provisions, the Registrant has been informed that in the opinion of the U.S. Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933, as amended, and is therefore unenforceable.

The exhibits listed in the exhibit index, appearing elsewhere in this Registration Statement, have been filed as part of this Registration Statement.

# PART III

# UNDERTAKING AND CONSENT TO SERVICE OF PROCESS

# Item 1. Undertaking

The Registrant undertakes to make available, in person or by telephone, representatives to respond to inquiries made by the Commission staff, and to furnish promptly, when requested to do so by the Commission staff, information relating to the securities registered pursuant to Form F-10 or to transactions in said securities.

# Item 2. Consent to Service of Process

A written Appointment of Agent for Service of Process and Undertaking on Form F-X for the Registrant and its agent for service of process was filed concurrently with the initial filing of this Registration Statement on Form F-10.

Any change to the name or address of the agent for service of process of the Registrant shall be communicated promptly to the Commission by amendment to Form F-X referencing the file number of this Registration Statement on Form F-10.

# EXHIBIT INDEX

Exhibit Number	Description	
<u>3.1</u>	Agency Agreement	
<u>3.2</u>	Warrant Indenture	
4.1	Annual information form of the Registrant dated March 31, 2018 for the fiscal year ended December 31, 2017 (incorporated by reference from Exhibit No. 99.3 to the Registrant's Form 40-F, filed with the Commission on June 11, 2018).	
<u>4.2</u>	Audited consolidated financial statements of the Registrant, as at and for the years ended December 31, 2018 and 2017, together with the notes thereto and the independent auditor's reports thereon (incorporated by reference from Exhibit No. 99.1 to the Registrant's Form 6-K, filed with the Commission on February 15, 2019).	
<u>4.3</u>	Management's discussion and analysis of financial condition and results of operations for the year ended December 31, 2018 (incorporated by reference from Exhibit No. 99.2 to the Registrant's Form 6-K, filed with the Commission on February 15, 2019).	
4.4	Management information circular of the Registrant dated May 11, 2018 relating to the Registrant's annual and special meeting of shareholders on June 14, 2018 (incorporated by reference from Exhibit 99.125 to the Registrant's Form 40-F, filed with the Commission on June 11, 2018).	
4.5	Material change report of the Registrant dated April 2, 2018 in respect of the filing of a preliminary short form prospectus and the announcement of pricing details for a previous public offering (incorporated by reference from Exhibit No. 99.109 to the Registrant's Form 40-F, filed with the Commission on June 11, 2018).	
4.6	Material change report of the Registrant dated April 10, 2018 in respect of the filing of a final short form prospectus and the closing of a previous public offering (incorporated by reference from Exhibit No. 99.116 to the Registrant's Form 40-F, filed with the Commission on June 11, 2018).	
<u>4.7</u>	Material change report of the Registrant dated May 22, 2018 in respect of the closing of the over-allotment option on a previous public offering (incorporated by reference from Exhibit No. 99.127 to the Registrant's Form 40-F, filed with the Commission on June 11, 2018).	
4.8	Material change report of the Registrant dated June 5, 2018 in respect of the NASDAQ Listing (incorporated by reference from Exhibit No. 99.130 to the Registrant's Form 40-F, filed with the Commission on June 11, 2018).	
4.9	Material change report of the Registrant dated August 14, 2018 in respect of the filing of a final short form prospectus and the closing of a previous public offering (incorporated by reference from Exhibit No. 99.2 to the Registrant's Form 6-K, filed with the Commission on August 28, 2018).	
4.10	Material change report of the Registrant dated March 6, 2019 in respect of the filing of a preliminary short form prospectus and the announcement of pricing details for this offering (incorporated by reference from Exhibit 99.1 to the Registrant's Form 6-K, filed with the Commission on March 7, 2019).	
<u>4.11</u>	Investor Presentation of the Registrant, dated March 18, 2019	
<u>5.1</u>	Consent of BDO Canada LLP	
<u>5.2</u>	Consent of Borden Ladner Gervais LLP	
<u>5.3</u>	Consent of Baker & McKenzie LLP	
6.1	Powers of Attorney (included on the signature page of the initial Registration Statement).	
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# **SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form F-10 and has duly caused this Amendment No.1 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Toronto, Country of Canada on March 18, 2019.

# TITAN MEDICAL INC.

By: /s/ Stephen Randall

Name: Stephen Randall
Title: Chief Financial Officer

Pursuant to the requirements of the Securities Act of 1933, this Amendment No.1 to the Registration Statement has been signed below by the following persons in the capacities indicated and on the dates indicated.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed below by the following persons in the capacities indicated and on the dates indicated.

Signature	Capacity	Date
*	President, Chief Executive Officer	March 18, 2019
David McNally	(Principal Executive Officer) and Director	
/s/ Stephen Randall	Chief Financial Officer	March 18, 2019
Stephen Randall	(Principal Financial and Accounting Officer) and Director	
*	Director and Chairman	March 18, 2019
John E. Barker		
	Director	March 18, 2019
John E. Schellhorn		
*	Director	March 18, 2019
Bruce G. Wolff		
*	Director	March 18, 2019
Domenic Serafino		
* By: /s/ Stephen Randall Name: Stephen Randall		
Name: Stephen Randall Attorney-in-fact		

# AUTHORIZED REPRESENTATIVE

Pursuant to the requirements of Section 6(a) of the Securities Act of 1933, as amended, the undersigned has signed this Amendment No. 1 to the Registration Statement, in the capacity of the duly authorized representative of the Registrant in the United States, on March 18, 2019.

/s/ David McNally

Name: David McNally Title: Chief Executive Officer

## AGENCY AGREEMENT

March 18, 2019

Titan Medical Inc. 170 University Avenue, Suite 1000 Toronto, Ontario M5H 3B3

# Attention: David J. McNally, President and Chief Executive Officer

Dear Sir:

Bloom Burton Securities Inc. (the "Agent") understands that Titan Medical Inc. (the "Corporation") proposes to issue and sell a minimum of 5,882,353 units of the Corporation (the "Offered Units") and up to a maximum of 7,352,941 Offered Units at a price of US \$3.40 per Offered Unit (the "Offering Price") for aggregate gross proceeds of a minimum of US \$20,000,000 (the "Minimum Offering") up to a maximum of US \$25,000,000 (the "Maximum Offering"). Each Offered Unit shall consist of (i) one Common Share (as defined herein) (a "Unit Share") and (ii) one Common Share purchase warrant (a "Warrant"). Each Warrant shall be issued pursuant to and subject to the terms of the Warrant Indenture (as defined herein). Each Warrant shall entitle the holder thereof to purchase one Common Share (a "Warrant Share") at an exercise price of US \$4.00 per Warrant Share, subject to adjustment, at any time until 5:00 p.m. (Toronto time) on the date that is 60 months after the Initial Closing Date (as defined herein), provided that in the event of an issuance of Common Shares, securities convertible into Common Shares or certain other issuances at a price below the then existing exercise price, the exercise price shall be adjusted to equal to the price at which such securities are issued, subject to a floor of US\$3.95 per share, all as shall be provided in the Warrant Indenture. The offering of the Offered Units by the Corporation is hereinafter referred to as the "Offering".

The Corporation wishes to appoint the Agent to act as its sole and exclusive agent, and to effect the sale of the Offered Units on a best efforts basis. The Agent shall be entitled to appoint a soliciting dealer group consisting of other registered dealers acceptable to the Corporation (each, a "Selling Firm") for the purpose of arranging for purchases of the Offered Units. With respect to the offer or sale of any Offered Units in the United States or to, or for the account or benefit of, U.S. Persons (as defined herein), the parties to this Agreement (as defined herein) acknowledge and agree that the Agent may appoint duly registered U.S. broker-dealers (each such Selling Firm, a "U.S. Selling Group Member") to act as sub-agents to conduct offers and sales of the Offered Units in the United States or to, or for the account or benefit of, persons in the United States or U.S. Persons.

The Corporation has granted the Agent an option (the "Over-Allotment Option"), exercisable in whole or in part at any time and from time to time until that date which is 30 days following the Initial Closing Date (as herein defined) (the "Over-Allotment Expiry Date"), to offer for sale such number of additional Units (the 'Over-Allotment Units') and/or Warrants (the "Over-Allotment Warrants" and together with the Over-Allotment Units, the "Over-Allotment Securities")) as is equal to 15% of the number of Units issued under the Offering, solely to cover over-allotments, if any, and for market stabilization purposes. The Over-Allotment Option may be exercised by the Agent in respect of: (i) Over-Allotment Units at the Offering Price; (ii) Over-Allotment Warrants at a price of US \$2.08 per Over-Allotment Warrant; or (iii) any combination of Over-Allotment Units and/or Over-Allotment Warrants, provided that the aggregate number of Over-Allotment Securities does not exceed 15% of the number of Units issued under the Offering (excluding any Over-Allotment Securities). The Offered Units and the Over-Allotment Securities are sometimes collectively referred to herein as the "Qualified Securities". The Common Shares that are included in the Over-Allotment Units are referred to herein as the "Over-Allotment Shares" and the Common Shares issuable upon exercise of the Over-Allotment Warrants (including Warrants issuable as part of the Over-Allotment Units) are referred to herein as the "Over-Allotment Warrant Shares".

In consideration of the Agent's services hereunder, the Corporation agrees to pay to the Agent on each Closing Date a fee (the "Agency Fee") equal to 7.0% of the gross proceeds realized by the Corporation in respect of the sale of the Offered Units on such Closing Date (or US \$0.238 per Unit) including any proceeds raised through the sale of Over-Allotment Securities pursuant to the exercise of the Over-Allotment Option. As additional consideration for its services performed under this Agreement, the Corporation shall issue to the Agent, on each Closing Date (in such name or names as the Agent may direct in writing) compensation warrants (the "Compensation Warrants") exercisable to acquire that number of Common Shares (the 'Compensation Shares') as is equal to 7.0% of the Offered Units and/or Over-Allotment Securities sold under the Offering on such Closing Date. Each Compensation Warrant shall be exercisable, in whole or in part, at an exercise price per Compensation Share equal to the Offering Price, subject to adjustment, at any time before 5:00 p.m. (Toronto time) on the date that is 24 months following the Initial Closing Date.

The obligation of the Corporation to pay the Agency Fee and to issue the Compensation Warrants shall arise at the Closing Time (as defined herein) against payment for the Units and the Agency Fee and Compensation Warrants shall be fully earned by the Agent at such time.

The completion of the Offering may occur in one or more separate closings on one or more dates (each, a 'Closing Date') as the Corporation and the Agent may agree. Provided that the Minimum Offering is subscribed for, it is expected that the first Closing Date will occur on or about March 21, 2019 or such other date as the Corporation and the Agent may agree provided that date is not later than 45 days after the Final Receipt (as herein defined) is issued (the "Initial Closing Date").

If subscriptions for the Minimum Offering have not been received within 10 days following the date of the Final Receipt (as defined herein), the Offering will not continue and the subscription proceeds will be returned to subscribers, without interest or deduction. In any event, the total period of the distribution will not end more than 45 days from the date of the Final Receipt. Should a Closing occur in respect of the Minimum Offering, one or more additional Closings, if necessary, may occur until the earlier of the Maximum Offering being subscribed and the expiry of the 45-day period.

It is understood that the Offered Units will be offered to Purchasers (as defined herein) resident in: (i) each of the provinces of British Columbia, Alberta and Ontario and such other jurisdictions in Canada as mutually agreed upon the Corporation and the Agent (collectively, the "Canadian Selling Jurisdictions"); (ii) the United States (as defined herein) in a public offering registered on Form F-10; and (iii) jurisdictions other than the Canadian Selling Jurisdictions and the United States as may mutually be agreed to by the Corporation and the Agent (collectively with the Canadian Selling Jurisdictions and the United States, the "Selling Jurisdictions"), on a private placement basis, provided that the Corporation is not required to file a prospectus, registration statement or other disclosure document or become subject to continuing obligations in such other jurisdictions, in each case in accordance with the provisions of this Agreement.

## **DEFINITIONS**

Unless expressly provided otherwise, where used in this Agreement, the following terms shall have the following meanings:

"affiliate", "associate", "material change", "material fact" and "misrepresentation" shall have the respective meanings ascribed thereto under Applicable Securities Laws of the Canadian Selling Jurisdictions;

- "Agency Fee" has the meaning ascribed thereto in the fourth paragraph of this Agreement;
- "Agent" has the meaning ascribed thereto in the first paragraph of this Agreement;
- "Agreement" means the agreement resulting from the acceptance by the Corporation of the offer made hereby;
- "Annual Financial Statements" means the audited financial statements of the Corporation as at and for its fiscal years ended December 31, 2018 and 2017;
- "Applicable IP Laws" means, with respect to a specific Intellectual Property, all applicable federal, provincial, state and local laws and regulations applicable to that Intellectual Property in the countries where rights in such Intellectual Property arise, the countries including, but not limited to, China, Canada, the United States, the European Union and the jurisdictions in which the Corporation has registered Intellectual Property;
- "Applicable Laws" means all applicable federal, provincial, state and local laws and regulations of authorities having jurisdiction over the Corporation or the Agent, as applicable;
- "Applicable Securities Laws" means, collectively, the applicable securities laws of the Selling Jurisdictions, the regulations, rules, rulings and orders made thereunder, the applicable published policy statements issued by the applicable securities commissions thereunder, the rules and policies of the Exchanges;
- "Applied for Corporation IP" means all Corporation IP that is the subject of an application with a national intellectual property office (including the CIPO and the USPTO);
- "Business Day" means a day which is not a Saturday, Sunday or statutory or civic holiday in the City of Toronto, Ontario;
- "Canadian Securities Regulators" means, collectively, the applicable securities commission or securities regulatory authority in each of the Canadian Selling Jurisdictions;
- "Canadian Selling Jurisdictions" has the meaning ascribed thereto in the eighth paragraph of this Agreement;
- "CDS" means CDS Clearing and Depository Services Inc.;
- "CIPO" means the Canadian Intellectual Property Office;
- "Claims" has the meaning ascribed thereto in Section 13;
- "Closing" means the Initial Closing or any Subsequent Closing, as the case may be;
- "Closing Date" has the meaning ascribed thereto in the sixth paragraph of this Agreement;
- "Closing Time" means 8:00 a.m. (Toronto time) on the Closing Date or such other time on the Closing Date as the Corporation and the Agent may agree;
- "Common Shares" means the common shares in the capital of the Corporation, which the Corporation is authorized to issue, as constituted on the date hereof;

- "comparables" has the meaning ascribed thereto in NI 41-101;
- "Compensation Warrants" has the meaning ascribed thereto in the third paragraph of this Agreement;
- "Compensation Shares" has the meaning ascribed thereto in the third paragraph of this Agreement;
- "Compensation Warrant Certificates" means the certificates representing the Compensation Warrants;
- "Corporation" has the meaning ascribed thereto in the first paragraph of this Agreement;
- "Corporation's Auditors" means BDO Canada LLP, Chartered Accountants;
- "Corporation IP" means the Intellectual Property identified in Schedule "B" and Schedule "C" to this Agreement;
- "Disclosure Record" means all information contained in any press releases, material change reports, financial statements, prospectuses, annual and quarterly reports or other document of the Corporation which has been publicly filed on SEDAR by, or on behalf of, the Corporation pursuant to Applicable Securities Laws of the Canadian Selling Jurisdictions:
- "Distribution" means "distribution" or "distribution to the public" as those terms are defined under Applicable Securities Laws of the Canadian Selling Jurisdictions and the United States;
- "Documents Incorporated by Reference" means all financial statements, management's discussion and analysis, management information circulars, annual information forms, material change reports or other documents issued by the Corporation, whether before or after the date of this Agreement, that are required by NI 44-101 to be incorporated by reference into the Prospectus or any Prospectus Amendment;
- "Due Diligence Session" has the meaning ascribed thereto in subsection 6(c);
- "EDGAR" means the system for Electronic Data Gathering, Analysis and Retrieval maintained by the SEC;
- "Effective Notice" means notification from the SEC that the Final Prospectus is effective;
- "Eligible Issuer" means an issuer that meets the criteria and has complied with the requirements of NI 44-101 so as to allow it to offer its securities using a short form prospectus;
- "Engagement Letter" means the engagement letter dated March 1, 2019 between the Corporation and the Agent relating to the Offering;
- "Environmental Laws" has the meaning ascribed thereto in subsection 7(jj);
- "Exchanges" means, collectively, the TSX and NASDAQ;
- "FDA" means the U.S. Food and Drug Administration of the U.S. Department of Health & Human Services;
- "Final Prospectus" means, as applicable, (i) the (final) short form prospectus of the Corporation, including all of the Documents Incorporated by Reference, to be dated on or about the date hereof relating to the Distribution of the Offered Units and for which a receipt will have been issued by the Ontario Securities Commission, as principal regulator, the British Columbia Securities Commission and the Alberta Securities Commission pursuant to the Passport System and/or (ii) the corresponding final prospectus (with such deletions therefrom and additions thereto as are permitted or required by Form F-10 and the applicable rules and regulations of the SEC) filed by the Corporation with the SEC as a pre-effective amendment to the Corporation's registration statement on Form F-10;

- "Final Receipt" means a receipt or deemed receipt for the Final Prospectus issued by the Canadian Securities Regulators;
- "Financial Statements" means the Annual Financial Statements;
- "Form F-10" means the registration statement filed with the SEC on Form F-10 (No. 333-230072) in respect of the Offered Units;
- "Indemnified Party" or "Indemnified Parties" has the meaning ascribed thereto in Section 13;
- "Initial Closing" means the completion of the initial issue and sale by the Corporation of the Offered Units pursuant to this Agreement;
- "Initial Closing Date" means March 21, 2019 or such other date as may be agreed upon between the Corporation and the Agent for the Initial Closing that is not later than 45 days after the Final Receipt is issued;
- "Institutional Accredited Investor" means an institutional "accredited investor" within the meaning of Rule 501(a)(1), (2), (3) or (7) of Regulation D under the U.S. Securities Act;
- "Intellectual Property" means all copyrights, patents, patent rights, industrial designs, know-how (including trade secrets and other unpatented or unpatentable proprietary or confidential information, systems or procedures);
- "knowledge" means, as it pertains to the Corporation, the actual knowledge, after due inquiry, of the President and Chief Executive Officer, the Chief Financial Officer and, in the case of matters relating to Corporation IP and Licensed IP, the employee of the Corporation that is the most responsible for directing such matters;
- "Leased Premises" has the meaning ascribed thereto in subsection 7(mm);
- "Licensed IP" means the Intellectual Property owned by any person other than the Corporation and to which the Corporation has a license which has not expired or been terminated;
- "marketing materials" has the meaning ascribed thereto in NI 41-101;
- "Material Adverse Effect" means any change, event, violation, inaccuracy, circumstance or effect that is materially adverse to the business, assets (including intangible assets), capitalization, financial condition or results of operations of the Corporation, whether or not arising in the ordinary course of business;
- "Material Agreement' means any "material contract" required to be filed on SEDAR by the Corporation pursuant to NI 51-102;
- "Material Permits" has the meaning ascribed thereto in subsection 7(rr);
- "Maximum Offering" has the meaning ascribed thereto in the first paragraph of this Agreement;
- "MI 11-102" means Multilateral Instrument 11-102 Passport System;

- "Minimum Offering" has the meaning ascribed thereto in the first paragraph of this Agreement;
- "NASDAQ" means the NASDAQ Capital Market;
- "NI 41-101" means National Instrument 41-101 General Prospectus Requirements;
- "NI 44-101" means National Instrument 44-101 Short Form Prospectus Distributions;
- "NI 51-102" means National Instrument 51-102 Continuous Disclosure Obligations,
- "NP 11-202" means National Policy 11-202 Process for Prospectus Reviews in Multiple Jurisdictions,
- "Notice" has the meaning ascribed thereto in Section 18;
- "Offered Units" has the meaning ascribed thereto in the first paragraph of this Agreement;
- "Offering" has the meaning ascribed thereto in the first paragraph of this Agreement;
- "Offering Documents" has the meaning ascribed to such term in subsection 5(a)(iii);
- "Offering Price" has the meaning ascribed thereto in the first paragraph of this Agreement;
- "Over-Allotment Option" has the meaning ascribed thereto in the third paragraph of this Agreement;
- "Over-Allotment Closing" has the meaning ascribed thereto in Section 10;
- "Over-Allotment Closing Date" means the date, which shall be a Business Day, as set out in the Over-Allotment Option Notice or such other date that the Corporation and the Agent may agree;
- "Over-Allotment Closing Time" means 8:00 a.m. (Toronto time) on the Over-Allotment Closing Date or such other time on the Over-Allotment Closing Date as the Corporation and the Agent may agree;
- "Over-Allotment Expiry Date" has the meaning ascribed thereto in the third paragraph of this Agreement;
- "Over-Allotment Option Notice" has the meaning ascribed thereto in Section 10;
- "Over-Allotment Securities" has the meaning ascribed thereto in the third paragraph of this Agreement;
- "Over-Allotment Shares" has the meaning ascribed thereto in the third paragraph of this Agreement;
- "Over-Allotment Units" has the meaning ascribed thereto in the third paragraph of this Agreement;
- "Over-Allotment Warrant Shares" has the meaning ascribed thereto in the third paragraph of this Agreement;
- "Over-Allotment Warrants" has the meaning ascribed thereto in the third paragraph of this Agreement;
- "Passport System" means the system and process for prospectus reviews provided for under MI 11-102 and NP 11-202;
- "person" shall be interpreted broadly and shall include any individual, corporation, partnership, joint venture, association, trust or other legal entity;

"Preliminary Prospectus" means (i) the preliminary short form prospectus of the Corporation, including all of the Documents Incorporated by Reference, dated March 5, 2019 relating to the Distribution of the Qualified Securities and for which a receipt has been issued by the Ontario Securities Commission, as principal regulator, and the Canadian Securities Regulators in the other Canadian Selling Jurisdictions pursuant to the Passport System and (ii) the corresponding preliminary short form prospectus (with such deletions therefrom and additions thereto as are permitted or required by Form F-10 and the applicable rules and regulations of the SEC) filed by the Corporation with the SEC on the Corporation's registration statement on Form F-10;

"Prospectus" means, as the context requires, the Preliminary Prospectus and/or the Final Prospectus, including any Prospectus Amendment;

"Prospectus Amendment" means any amendment or supplement to the Prospectus;

"Purchasers" means any persons who acquire Qualified Securities at the Closing Time or Over-Allotment Closing Time;

"Qualified Securities" has the meaning ascribed thereto in the third paragraph of this Agreement;

"Registered Corporation IP" means all Corporation IP that is the subject of a registration with a national intellectual property office (including the CIPO and the USPTO);

"Regulatory Authority" means the statutory or governmental bodies authorized under Applicable Laws to protect and promote public health through regulation and supervision of therapeutic drug candidates intended for use in humans, including the FDA and Health Canada and any other regulatory or governmental agency having jurisdiction over the Corporation or its activities;

"SEC" means the United States Securities and Exchange Commission;

"Securities Regulators" means the applicable securities regulatory authorities in the Selling Jurisdictions, including the Canadian Securities Regulators and the Exchanges;

"SEDAR" means the system for electronic document analysis and retrieval operated by the Canadian Securities Administrators;

"Selling Firm" has the meaning ascribed thereto in the second paragraph of this Agreement;

"Selling Jurisdictions" has the meaning ascribed thereto in the eighth paragraph of this Agreement;

"SR&ED" has the meaning ascribed thereto in subsection 7(k);

"Standard Listing Conditions" means the standard post-Closing conditions imposed by the TSX in the TSX Letter, which shall, for the avoidance of doubt, exclude any requirement for shareholder approval;

"standard term sheet" has the meaning ascribed thereto in NI 41-101;

"Subsequent Closing" has the meaning set out in Section 8;

"Subsequent Closing Date" means such date as may be agreed upon between the Corporation and the Agent for the Subsequent Closing but in any event shall be not later than the date that is 45 days after the date of the Final Receipt;

"Taxes" has the meaning ascribed thereto in subsection 7(j);

"template version" has the meaning ascribed thereto in NI 41-101;

"Transfer Agent" means Computershare Investor Services Inc.;

"TSX" means the Toronto Stock Exchange;

"TSX Letter" means the conditional approval letter dated March 12, 2019 issued by the TSX in respect of the Offering;

"TSX Manual" means the TSX Company Manual;

"Unit Share" has the meaning ascribed thereto in the first paragraph of this Agreement;

"United States" or "U.S." means the United States of America, its territories and possessions, any state of the United States, and the District of Columbia;

"USPTO" means the United States Patent and Trademark Office;

"U.S. Exchange Act" means the United States Securities and Exchange Act of 1934, as amended;

"U.S. Person" means a "U.S. person" as such term is defined in Regulation S under the U.S. Securities Act;

"U.S. Securities Act" means the United States Securities Act of 1933, as amended;

"U.S. Securities Laws" means all applicable United States federal securities laws, including, without limitation, the U.S. Securities Act, the U.S. Exchange Act and the rules and regulations promulgated thereunder;

"U.S. Selling Group Member" has the meaning ascribed thereto in the second paragraph of this Agreement;

"Warrant" has the meaning ascribed thereto in the first paragraph of this Agreement;

"Warrant Certificates" means the certificates representing the Warrants substantially in the form set out in the Warrant Indenture;

"Warrant Indenture" means the warrant indenture between the Corporation and Computershare Trust Company of Canada, in its capacity as warrant agent, governing the Warrants and the Over-Allotment Warrants; and

"Warrant Share" has the meaning ascribed thereto in the first paragraph of this Agreement.

The following are the schedules attached to this Agreement, which schedules are deemed to be a part hereof and are hereby incorporated by reference herein:

Schedule "A" - Convertible Securities
Schedule "B" - Corporation IP
Schedule "C" - Licensor Contracts

## TERMS AND CONDITIONS

#### 1. Nature of the Transaction

Based upon the foregoing and subject to the terms and conditions set out below, the Corporation hereby appoints the Agent to act as its sole and exclusive agent, and the Agent hereby accepts such appointment, to effect the sale of the Offered Units for an aggregate purchase price of a minimum amount equal to the Minimum Offering up to a maximum amount equal to the Maximum Offering, on a best efforts basis to persons resident in the Selling Jurisdictions. The Agent agrees to use its best efforts to sell the Offered Units, but it is hereby understood and agreed that the Agent shall act as agent only and is under no obligation to purchase any of the Offered Units, although the Agent will be subject to subscriptions being received for the Minimum Offering. All funds received by the Agent will be held in trust until the Minimum Offering has been attained. Notwithstanding any other term of this Agreement, all subscription funds received by the Agent will be returned to the Purchasers if the Minimum Offering is not attained by the Closing Time.

During the Distribution of the Qualified Securities, the Corporation and Agent shall approve in writing (prior to such time that marketing materials are provided to potential investors) any marketing materials reasonably requested to be provided by the Agent to any potential investor, such marketing materials to comply with Applicable Securities Laws of the Canadian Selling Jurisdictions and the United States. The Agent shall provide a copy of any marketing materials used in connection with the Offering, to the Corporation in accordance with this Section 1. The Corporation shall file a template version and any revised template version of such marketing materials with the Canadian Securities Regulators and the SEC as soon as reasonably practicable after such marketing materials are so approved in writing by the Corporation and the Agent, and in any event on or before the day the marketing materials are first provided to any potential investor, and such filing shall constitute the Agent's authority to use such marketing materials in connection with the Offering. Any comparables shall be redacted from the template version in accordance with NI 44-101 prior to filing such template version with the Canadian Securities Regulators and a complete template version containing such comparables and any disclosure relating to the comparables, if any, shall be delivered to the Canadian Securities Regulators by the Corporation.

The Corporation and the Agent, on a several basis, covenant and agree:

- (a) not to provide any potential investor with any marketing materials unless a template version of such marketing materials has been filed by the Corporation with the Canadian Securities Regulators and, if required by U.S. Securities Laws, the SEC, on or before the day such marketing materials are first provided to any potential investor;
- (b) not to provide any potential investor with any materials or information in relation to the Distribution of the Qualified Securities or the Corporation other than: (i) such marketing materials that have been approved and filed in accordance with this Section 1; (ii) the Prospectus and any Prospectus Amendments; and (iii) any standard term sheets approved in writing by the Corporation and the Agent; and
- (c) that any marketing materials approved and filed in accordance with this Section 1 and any standard term sheets approved in writing by the Corporation and the Agent shall only be provided to potential investors in the Selling Jurisdictions where the provision of such marketing materials or standard term sheets does not contravene Applicable Securities Laws.

## 2. Final Prospectus

- (a) The Corporation shall, as soon as reasonably practicable following the execution of this Agreement, use its commercially reasonable efforts to: (i) prepare and file the Final Prospectus in each of the Canadian Selling Jurisdictions and with the SEC; (ii) obtain, pursuant to the Passport System, the Final Receipt; and (iii) take all other steps and proceedings that may be necessary to be taken by the Corporation in order to: (A) qualify the Qualified Securities for Distribution in each of the Canadian Selling Jurisdictions under Applicable Securities Laws; and (B) qualify the grant of the Compensation Warrants in each of the Canadian Selling Jurisdictions under Applicable Securities Laws, on or before 5:00 p.m. (Toronto time) on the date hereof or such later date as the Corporation and the Agent may agree.
- (b) The Corporation shall, as soon as possible following receipt by the Corporation of the Final Receipt, use its commercially reasonable efforts to: (i) obtain the Effective Notice from the SEC; and (ii) take all other steps and proceedings that may be necessary to be taken by the Corporation in order to: (A) qualify the Qualified Securities for Distribution in the United States under U.S. Securities Laws and (B) qualify the Compensation Warrants in the United States under U.S. Securities Laws.
- (c) Until the date on which the Distribution of the Qualified Securities is completed, the Corporation will use commercially reasonable efforts to promptly take, or cause to be taken, all additional steps and proceedings that may from time to time be required or desirable under Applicable Securities Laws of the Canadian Selling Jurisdictions and the United States under the U.S. Securities Act to continue to qualify the Distribution of the Qualified Securities and the Compensation Warrants, or, in the event that the Qualified Securities and the Compensation Warrants have, for any reason, ceased to so qualify, to so qualify again the Qualified Securities and the Compensation Warrants for Distribution in such Selling Jurisdictions.

# 3. Covenants and Representations of the Agent

- (a) The Agent has complied and will comply, and shall require any other Selling Firm with which the Agent has a contractual relationship in respect of the Distribution of the Qualified Securities (including, for the avoidance of doubt, the U.S. Selling Group Members) to comply, with Applicable Securities Laws in connection with the Distribution of the Qualified Securities, shall ensure that each Selling Firm agrees to comply with the covenants and obligations given by the Agent herein, to the extent applicable, and shall offer the Qualified Securities for sale to the public in the Selling Jurisdictions directly and through Selling Firms upon the terms and conditions set out in the Prospectus and this Agreement. The Agent agrees to obtain such an agreement of each Selling Firm. The Agent has offered and will offer, and shall require any Selling Firm to offer, for sale to the public and sell the Qualified Securities only in those jurisdictions where they may be lawfully offered for sale or sold.
- (b) The Agent shall, and shall require any Selling Firm to agree to, distribute the Qualified Securities in a manner which complies with and observes all Applicable Laws in each jurisdiction into and from which they may offer to sell Qualified Securities or distribute the Prospectus or any Prospectus Amendment in connection with the Distribution of the Qualified Securities and will not, directly or indirectly, offer, sell or deliver any Qualified Securities or deliver the Prospectus or any Prospectus Amendment to any person in any jurisdiction other than in the Canadian Selling Jurisdictions and the United States except in a manner which will not require the Corporation to comply with the registration, prospectus, filing or other similar requirements under the Applicable Laws relating to securities of such other jurisdictions.

- (c) The Agent shall use all reasonable efforts to complete the Distribution of the Qualified Securities pursuant to the Prospectus as early as practicable and the Agent shall advise the Corporation in writing when, in the opinion of the Agent, the Agent has completed the Distribution of the Qualified Securities and within 25 days of the last Closing Date provide a breakdown of the number of Qualified Securities distributed and proceeds received in each of the Canadian Selling Jurisdictions where such breakdown is required for the purpose of calculating fees payable to the Canadian Securities Regulators.
- (d) The Agent shall deliver a copy of the Prospectus and any Prospectus Amendment to each Purchaser.
- (e) The Agent represents and warrants to the Corporation and acknowledges that the Corporation is relying upon such representations and warranties in entering into this Agreement that:
  - (i) it is a valid and subsisting corporation, duly incorporated and in good standing under the laws of the jurisdiction in which it was incorporated;
  - (ii) it holds all licenses and permits that are required for carrying on its business in the manner in which such business has been carried on;
  - (iii) it has good and sufficient right and authority to enter into this Agreement and complete the transactions contemplated under this Agreement on the terms and conditions set forth herein;
  - (iv) all information reasonably requested by the Agent and its counsel in connection with the due diligence investigations of the Agent will be treated by the Agent and its counsel as confidential and will only be used in connection with the Offering;
  - (v) it is an appropriately registered investment dealer under provincial securities laws, rules and regulations of the Canadian Selling Jurisdictions so as to permit it to lawfully fulfil its obligations hereunder;
  - (vi) it and each Selling Firm that is not registered as a broker-dealer under Section 15 of the U.S. Exchange Act will not offer or sell any of the Qualified Securities in the United States or to, or for the account or benefit of, U.S. Persons other than through a U.S. Selling Group Member or otherwise in compliance with Rule 15a-6 under the U.S. Exchange Act; and

- (vii) all offers and sales of the Qualified Securities in the United States or to, or for the account or benefit of, U.S. Persons will be effected by a U.S. Selling Group Member in accordance with all applicable U.S. federal and state broker-dealer requirements. Such U.S. Selling Group Member is, and will be on the date of each offer or sale of the Qualified Securities in the United States, duly registered as a broker-dealer pursuant to Section 15(b) of the U.S. Exchange Act and the securities laws of each state in which such offer or sale is made (unless exempted from the respective states' broker-dealer registration requirements) and a member of and in good standing with the Financial Industry Regulatory Authority, Inc.
- (f) The representations and warranties of the Agent contained in this Agreement shall be true at the Closing Time and Over-Allotment Closing Time and they shall survive the completion of the transactions contemplated under this Agreement until the third anniversary of the last Closing Date.

For the purposes of this Section 3, the Agent shall be entitled to assume that the Qualified Securities are qualified for Distribution in any Canadian Selling Jurisdiction where the Final Receipt shall have been obtained pursuant to the Passport System following the filing of the Final Prospectus. The Agent shall be entitled to assume that the Qualified Securities are qualified for Distribution in the United States where an Effective Notice shall have been obtained from the SEC.

The Corporation understands and agrees that the Agent may arrange for Purchasers in jurisdictions other than Canada and the United States, on a private placement basis and provided that the purchase of such Qualified Securities does not contravene the Applicable Securities Laws of the jurisdiction where the Purchaser is resident and provided that such sale does not trigger: (i) any obligation to prepare and file a prospectus, registration statement or similar disclosure document; or (ii) any registration or other obligation on the part of the Corporation including, but not limited to, any continuing obligation in that jurisdiction.

#### 4. Deliveries

- (a) The Corporation shall deliver, or cause to be delivered to the Agent, without charge:
  - on the date hereof, a copy of the Preliminary Prospectus and the Final Prospectus, each signed and certified as required by Applicable Securities
     Laws:
  - (ii) contemporaneously with the filing of the Final Prospectus, a copy of any other document required to be filed or that is otherwise delivered by the Corporation in respect of the Offering under the laws of each of the Selling Jurisdictions in compliance with Applicable Securities Laws, to the extent not available on SEDAR or EDGAR;
  - (iii) prior to the filing of the Final Prospectus, copies of correspondence indicating that the application for the listing and posting for trading on the TSX of the Unit Shares, Warrant Shares, Over-Allotment Shares, Over-Allotment Warrant Shares and Compensation Shares have been approved for listing subject only to satisfaction by the Corporation of the Standard Listing Conditions;
  - (iv) contemporaneously with, prior to, or as soon as reasonably practicable after the filing of the Final Prospectus but in any event prior to the Initial Closing Date, copies of the correspondence indicating that the NASDAQ has been properly notified of the listing of the Unit Shares, Warrant Shares, Over-Allotment Shares, Over-Allotment Warrant Shares and Compensation Shares on the NASDAQ;

- (v) contemporaneously with, or prior to, the filing of the Final Prospectus, a "long form" comfort letter dated the date of the Final Prospectus, in form and substance satisfactory to the Agent, addressed to the Agent from the Corporation's Auditors with respect to financial and accounting information relating to the Corporation contained in the Final Prospectus, which letter shall be based on a review by the Corporation's Auditors within a cut-off date of not more than two Business Days prior to the date of the letter, which letter shall be in addition to the Corporation's Auditors consent letter addressed to the Canadian Securities Regulators; and
- (vi) prior to the filing of any Prospectus Amendment with the Securities Regulators and/or the SEC, a copy of such Prospectus Amendment signed and certified as required by Applicable Securities Laws of the Canadian Selling Jurisdictions. Concurrently with the delivery of any Prospectus Amendment, the Corporation shall deliver to the Agent and the Agent's counsel, with respect to such Prospectus Amendment, opinions, comfort letters and such other documentation substantially equivalent or similar to those referred to in this Section 4, as appropriate or reasonably requested by the Agent in the circumstances.
- (b) Delivery of the Prospectus and any Prospectus Amendment shall constitute a representation and warranty by the Corporation to the Agent that, as at the date of the Prospectus or Prospectus Amendment, as the case may be: (i) all information and statements (except information and statements relating solely to the Agent and provided by the Agent in writing) contained in the Prospectus and any Prospectus Amendments are true and correct in all material respects and contain no misrepresentation and constitute full, true and plain disclosure of all material facts relating to the Corporation and the Qualified Securities; (ii) no material fact or information has been omitted from such disclosure (except facts or information relating solely to the Agent and provided by the Agent in writing) which is required to be stated in such disclosure or is necessary to make the statements or information contained in such disclosure not misleading in light of the circumstances under which they were made; (iii) such documents comply in all material respects with the requirements of the Applicable Securities Laws of the Canadian Selling Jurisdictions and the U.S. Securities Act, and have been filed (and a receipt or notice of effectiveness of such filing will be obtained, if required) in each of the Canadian Selling Jurisdictions and the United States, as applicable; and (iv) except as set forth or contemplated in the Prospectus or any Prospectus Amendment, there has been no material change (actual, anticipated, contemplated, proposed or threatened) in the business, affairs, business prospects, operations, assets, liabilities (contingent or otherwise), capital or ownership of the Corporation since the end of the period covered by the Financial Statements. Such deliveries shall also constitute the Corporation's consent to the use by the Agent and any Selling Firm of the Prospectus and any Prospectus Amendment in connection with the Distribution of the Qualified Securities in the Selling Jurisdictions in compliance with this Agreemen
- (c) The Corporation shall cause commercial copies of the Final Prospectus and any Prospectus Amendment to be delivered to the Agent without charge, in such numbers and in such cities as the Agent may reasonably request. Such delivery shall be effected as soon as possible after obtaining the Final Receipt and, in any event, no later than 12:00 p.m. (Toronto time) on March 19, 2019 in respect of the Final Prospectus and 12:00 p.m. (Toronto time) on March 20, 2019 in respect of the Form F-10 or such other date and time as may be agreed upon by the Agent and the Corporation. The Corporation shall similarly cause to be delivered commercial copies of any Prospectus Amendment.

#### 5. Material Change During Distribution

- (a) During the Distribution of the Qualified Securities, the Corporation shall promptly notify the Agent in writing of:
  - any material change (actual, anticipated, contemplated, proposed or threatened) in the business, affairs, business prospects, operations, assets, liabilities (contingent or otherwise), capital or ownership of the Corporation;
  - (ii) any material fact which has arisen or has been discovered and would have been required to have been stated in the Prospectus had the fact arisen or been discovered on, or prior to, the date of the Prospectus; and
  - (iii) any change in any material fact or matter covered by a statement contained in the Prospectus or any Prospectus Amendment (collectively, the "Offering Documents") which change is, or may be, of such a nature as to render any of the Offering Documents misleading or untrue or which would result in a misrepresentation in any of the Offering Documents or which would result in the Prospectus or any Prospectus Amendment not complying with the Applicable Securities Laws or other laws of any Canadian Selling Jurisdiction or the SEC.
- (b) The Corporation will comply with Section 57 of the Securities Act (Ontario) and with the comparable provisions of other Applicable Securities Laws in the Canadian Selling Jurisdictions, and the Corporation will prepare and will file any Prospectus Amendment, which, in the opinion of the Agent and its counsel, acting reasonably, may be necessary to continue to qualify the Qualified Securities for Distribution in each of the Canadian Selling Jurisdictions and the United States.
- (c) In addition to the provisions of subsections 5(a) and 5(b), the Corporation shall, in good faith, discuss with the Agent any fact or change in circumstances (actual, anticipated, contemplated, proposed or threatened, financial or otherwise) which is of such a nature that there is reasonable doubt whether written notice need be given under this section and shall consult with the Agent with respect to the form and content of any amendment or other Prospectus Amendment proposed to be filed by the Corporation, it being understood and agreed that no such amendment or other Prospectus Amendment shall be filed with any Securities Regulator prior to the review thereof by the Agent and its counsel, acting reasonably.

# 6. Covenants of the Corporation

The Corporation hereby covenants to the Agent that the Corporation:

(a) shall advise the Agent, promptly after receiving notice thereof, of the time when the Final Prospectus and any Prospectus Amendment has been filed with the Canadian Securities Regulators and the SEC, and receipts for the filings with the Canadian Securities Regulators have been obtained pursuant to the Passport System and will provide evidence reasonably satisfactory to the Agent of each such filing and copies of such receipts;

- (b) shall advise the Agent promptly after receiving the Effective Notice and shall provide evidence thereof;
- (c) shall prior to the Closing Time and the Over-Allotment Closing Time, allow the Agent (and its counsel and consultants) to conduct all due diligence which the Agent may reasonably require or consider necessary or appropriate in order to fulfill the Agent's obligations as registrants to complete the Offering as provided herein. The Corporation will provide to the Agent (and its counsel and consultants) reasonable access to the Corporation's properties (if any), senior management personnel and corporate, financial and other records, for the purposes of conducting such due diligence. Without limiting the scope of the due diligence inquiry the Agent (or its counsel and consultants) may conduct, the Corporation shall also make available its directors, senior management and counsel to answer any questions which the Agent may have and to participate in one or more due diligence sessions to be held prior to each Closing and Over-Allotment Closing (collectively, the "Due Diligence Session"). The Agent shall distribute a list of written questions in advance of each Due Diligence Session;
- (d) shall forthwith advise the Agent of, and provide the Agent with copies of, any written communications relating to:
  - (i) the issuance by any securities regulatory authority, including the Exchanges, of any order suspending or preventing the use of the Prospectus or any Prospectus Amendment or any cease trading or stop order or any halt in trading relating to the Common Shares or the institution or threat of any proceedings for that purpose; and
  - (ii) the receipt of any material communication from any securities regulatory authority, including the Exchanges or other authority relating to the Prospectus or any Prospectus Amendment or the Offering;
- (e) shall use its commercially reasonable efforts to prevent the issuance of any order referred to in (d)(i) above and, if issued, shall forthwith take all reasonable steps which it is able to take and which may be necessary or desirable in order to obtain the withdrawal thereof as soon as is reasonably practicable;
- (f) shall use its commercially reasonable efforts to maintain its status as a "reporting issuer" (or the equivalent thereof) not in default of the requirements of the Applicable Securities Laws of each of the Canadian Selling Jurisdictions and the United States for as long as any Warrants remain outstanding, other than in a business combination or similar transaction where all the outstanding securities of the Corporation have been exchanged for cash or the securities of another issuer which is a reporting issuer under any Applicable Securities Laws;
- (g) shall use its commercially reasonable efforts to maintain the listing of the Common Shares on the Exchanges or such other recognized stock exchange or quotation system as the Agent may approve, acting reasonably, for as long as any Warrants remain outstanding, other than in a business combination or similar transaction where all the outstanding securities of the Corporation have been exchanged for cash or the securities of another issuer which is a reporting issuer under any Applicable Securities Laws;

- (h) shall use its commercially reasonable efforts to ensure that the Unit Shares, Warrant Shares, Over-Allotment Shares, Over-Allotment Warrant Shares and Compensation Shares will be conditionally approved for listing on the TSX upon their issue, subject only to Standard Listing Conditions, and that the NASDAQ be properly notified of the listing of the Unit Shares, Warrant Shares, Over-Allotment Shares, Over-Allotment Warrant Shares and Compensation Shares on the NASDAQ such that such securities are listed on the NASDAQ by the Initial Closing Date;
- (i) shall use the net proceeds of the Offering in the manner and subject to the qualifications described in the Prospectus under the heading "Use of Proceeds";
- (j) shall, as soon as practicable, use its commercially reasonable efforts to receive all necessary consents to the transactions contemplated herein.

## 7. Representations and Warranties of the Corporation

The Corporation hereby represents and warrants to the Agent that as at the date hereof:

- (a) the Corporation has been duly incorporated, continued or amalgamated and is validly existing under the laws of its governing jurisdiction, has all requisite power and authority and is duly qualified to carry on its business as now conducted and to own or lease its properties and assets and the Corporation has all requisite corporate power and authority to carry out its obligations under this Agreement, the Warrant Indenture (upon execution and delivery thereof), the Compensation Warrant Certificates (upon execution and delivery thereof) and any other document, filing, instrument or agreement delivered in connection with the Offering, and to carry out its obligations hereunder and thereunder;
- (b) no agreement is in force or effect which in any manner affects the voting or control of any of the securities of the Corporation to which the Corporation is a party or of which the Corporation has knowledge;
- (c) the Corporation does not beneficially own, or exercise control or direction over, 10% or more of the outstanding voting shares of any company;
- (d) all consents, approvals, permits, authorizations or filings as may be required under Applicable Securities Laws necessary for the execution and delivery of this Agreement and the sale of the Offered Units, and the consummation of the transactions contemplated hereby, have been made or obtained or will be obtained prior to the Initial Closing Date, as applicable, subject only to the Standard Listing Conditions and any post-Closing notice filings required under applicable United States federal or state securities laws;
- (e) upon the execution and delivery thereof, each of this Agreement, the Warrant Indenture, the Warrant Certificates and the Compensation Warrant Certificates shall constitute a valid and binding obligation of the Corporation and each shall be enforceable against the Corporation in accordance with its terms, except as enforcement thereof may be limited by bankruptcy, insolvency, reorganization, moratorium and other laws relating to or affecting the rights of creditors generally and except as limited by the application of equitable principles when equitable remedies are sought, and by the fact that rights to indemnity, contribution and waiver, and the ability to sever unenforceable terms, may be limited by Applicable Laws;

- (f) the currently issued and outstanding Common Shares are listed and posted for trading on the Exchanges and no order ceasing or suspending trading in the Common Shares or prohibiting the trading of any of the Common Shares has been issued and no proceedings for such purpose are pending or, to the knowledge of the Corporation, threatened;
- (g) the definitive form of certificate representing the Common Shares complies with the requirements of the Business Corporations Act (Ontario), complies with the requirements of the TSX Manual and does not conflict with the constating documents of the Corporation;
- (h) the Annual Financial Statements:
  - have been prepared in accordance with international financial reporting standards in Canada consistently applied throughout the period referred to therein:
  - (ii) contain no misrepresentation and present fairly, in all material respects, the financial position (including the assets and liabilities, whether absolute, contingent or otherwise) of the Corporation as at such dates and results of operations of the Corporation for the periods then ended; and
  - (iii) contain and reflect adequate provision or allowance for all reasonably anticipated liabilities, expenses and losses of the Corporation,

and there has been no change in accounting policies or practices of the Corporation since December 31, 2016;

- (i) the Corporation has not declared or paid any dividends or declared or made any other payments or distributions on or in respect of any of the Common Shares and has not, directly or indirectly, redeemed, purchased or otherwise acquired any of its securities or agreed to do so or otherwise effected any return of capital with respect to such securities;
- (j) all taxes (including income tax, capital tax, payroll taxes, employer health tax, workers' compensation payments, property taxes, custom and land transfer taxes), duties, royalties, levies, imposts, assessments, deductions, charges or withholdings and all liabilities with respect thereto including any penalty and interest payable with respect thereto (collectively, "Taxes") due and payable by the Corporation have been paid except where the failure to pay such taxes would not have a Material Adverse Effect. All tax returns, declarations, remittances and filings required to be filed by the Corporation have been filed with all appropriate governmental authorities and all such returns, declarations, remittances and filings are complete and accurate and no material fact or facts have been omitted therefrom which would make any of them misleading except where such failure would not have a Material Adverse Effect. The Corporation has not received any written notice regarding examination of any tax return of the Corporation currently in progress and the Corporation has no knowledge of any facts that could give rise to any such examination and there are no issues or disputes outstanding with any governmental authority respecting any Taxes that have been paid, or may be payable, by the Corporation except where such examinations would not have a Material Adverse Effect:
- (k) the Scientific Research and Experimental Development ("SR&ED") credits receivable as described in the Offering Documents and any other SR&ED credits otherwise applied for by the Corporation are based on underlying work, expenses and claims of the Corporation giving rise to such SR&ED credits which satisfy the requirements of the *Income Tax Act* (Canada) in order for the Corporation to claim or have claimed such SR&ED credits, and to the knowledge of the Corporation there are no facts, circumstances or basis upon which the applicable taxing authority could reject, disallow, adversely reassess or deny the Corporation any such SR&ED credits, except as otherwise disclosed to the Agent in writing;

- (l) the Corporation's Auditors, which are the auditors who audited the Annual Financial Statements and who provided their audit report thereon, are independent public accountants under Applicable Securities Laws of the Canadian Selling Jurisdictions and there has never been a "reportable disagreement" (within the meaning of NI 51-102) between the Corporation and the Corporation's Auditors;
- (m) the Corporation maintains a system of internal accounting controls sufficient to provide reasonable assurance that:
  - (i) transactions are executed in accordance with management's general or specific authorization;
  - transactions are recorded as necessary to permit preparation of financial statements in conformity with international financial reporting standards and to maintain accountability for assets;
  - (iii) access to assets is permitted only in accordance with management's general or specific authorization; and
  - the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences;
- (n) the Corporation is in compliance with the certification requirements contained in National Instrument 52-109 Certification of Disclosure in Issuers' Annual and Interim Filings of the Canadian Securities Administrators with respect to the Corporation's annual and interim filings with Canadian Securities Regulators;
- (o) the audit committee of the Corporation is comprised and operates in accordance with the requirements of National Instrument 52-110 *Audit Committees* of the Canadian Securities Administrators;
- (p) except for the Warrants, the Over-Allotment Warrants, the Compensation Warrants and as set forth in Schedule "A" to this Agreement, no holder of outstanding securities of the Corporation will be entitled to any pre-emptive or any similar rights to subscribe for any of the Common Shares or other securities of the Corporation, and no rights, warrants or options to acquire, or instruments convertible into or exchangeable for, any shares in the capital of the Corporation are outstanding;
- (q) all information which has been prepared by the Corporation relating to the Corporation and its business, properties and liabilities that is or has been publicly disclosed or otherwise provided to the Agent or its counsel, including any investor or corporate presentations posted on the Corporation's website, and all financial, marketing, sales and operational information, is, as of the date of such information, true and correct in all material respects, contains no misrepresentation and no fact or facts have been omitted therefrom which would make such information misleading;

- (r) except as properly disclosed in the Offering Documents, the Corporation has not approved, has not entered into any agreement in respect of, and to the knowledge of the Corporation there are no facts or circumstances in respect of:
  - the purchase of any material property or assets or any interest therein or the sale, transfer or other disposition of any material property or assets or any interest therein currently owned, directly or indirectly, by the Corporation whether by asset sale, transfer of shares or otherwise;
  - (ii) the issuance of any securities of the Corporation or a right of first refusal with respect to the issuance by the Corporation of any securities;
  - (iii) any change in control of the Corporation (whether by sale, transfer or other disposition of shares or sale, transfer, lease or other disposition of all or substantially all of the property and assets of the Corporation);
  - (iv) a proposed or planned disposition of shares by any shareholder who owns, directly or indirectly, 10% or more of the outstanding shares of the Corporation; or
  - an agreement in force or having the effect of which in any manner affects or will affect the voting or control of any of the securities of the Corporation;
- (s) no legal or governmental proceedings are pending to which the Corporation is a party or to which its property is subject that would result individually or in the aggregate in a Material Adverse Effect and, to the knowledge of the Corporation, no such proceedings have been threatened against, or are contemplated with respect to, the Corporation or its properties;
- (t) the Corporation is the legal and beneficial owner, free of all mortgages, liens, charges, pledges, security interests, encumbrances, claims or demands whatsoever, of the interests in personal property referred to as owned by it in the Prospectus, and all material agreements under which the Corporation holds an interest in personal property are in good standing according to their terms;
- (u) the minute books and records of the Corporation made available to counsel for the Agent in connection with its due diligence investigations of the Corporation are all of the minute books and records of the Corporation and contain copies of all material proceedings of the shareholders, the board of directors and all committees of the board of directors of the Corporation to the date of review of such corporate records and minute books, and there have been no other meetings, resolutions or proceedings of the shareholders, board of directors or any committees of the board of directors of the Corporation not reflected in such minute books and other records;
- (v) the Corporation is, and will be at the Closing Time and Over-Allotment Closing Time, an Eligible Issuer and a reporting issuer under Applicable Securities Laws in the Canadian Selling Jurisdictions, and the Corporation is not in default in any material respect of any requirement of Applicable Securities Laws and the Corporation is not included in a list of defaulting reporting issuers maintained by the applicable Securities Regulators. In particular, without limiting the foregoing, the Corporation is in compliance at the date hereof with its obligations to make timely disclosure of all material changes relating to it and, since January 1, 2016, no such disclosure has been made on a confidential basis and there is no material change relating to the Corporation which has occurred and with respect to which the requisite material change report has not been filed, except to the extent that the Offering and the transactions contemplated thereunder may constitute a material change;

- (w) on March 5, 2019, the Corporation filed the Preliminary Prospectus in each of the Canadian Selling Jurisdictions and obtained, pursuant to the Passport System, a receipt or deemed receipt dated March 5, 2019 from the Ontario Securities Commission, as principal regulator, on behalf of the Canadian Securities Regulators for the Preliminary Prospectus;
- (x) the execution and delivery of each of this Agreement, the Warrant Indenture, the Warrant Certificates and the Compensation Warrant Certificates and the compliance with all provisions contemplated thereunder, the Offering and sale of the Qualified Securities and the issuance of the Qualified Securities and the Compensation Warrants does not and will not:
  - (i) require the consent, approval, authorization, registration or qualification of or with any governmental authority, stock exchange, securities regulatory authority or other third party (in each case in the Selling Jurisdictions), except: (A) such as have been obtained; or (B) such as may be required and will be obtained by the Closing Time on the Initial Closing Date;
  - (ii) result in a breach of, or default under, nor create a state of facts which, after notice or lapse of time or both, would result in a breach of or default under, nor conflict with:
    - (A) any of the terms, conditions or provisions of the constating documents or resolutions of the shareholders, board of directors or any committee of the board of directors of the Corporation;
    - (B) any Applicable Law applicable to the Corporation, including the Applicable Securities Laws, or any judgment, order or decree of any governmental body, agency or court having jurisdiction over the Corporation; or
    - (C) any Material Agreement; or
  - (iii) give rise to any lien, charge or claim in or with respect to the properties or assets now owned or hereafter acquired by the Corporation or the acceleration of or the maturity of any debt under any indenture, mortgage, lease, agreement or instrument binding or affecting the Corporation or any of its properties;
- the authorized capital of the Corporation consists of an unlimited number of Common Shares of which, as of the close of business on March 15, 2019,
   22,694,355 Common Shares are issued and outstanding as fully paid and non-assessable;
- (z) other than as contemplated hereby, there is no person acting or purporting to act at the request or on behalf of the Corporation that is entitled to any brokerage or finder's fee in connection with the Offering;
- (aa) all material disclosure filings required to be made by the Corporation pursuant to Applicable Securities Laws of the Canadian Selling Jurisdictions from January 1, 2016 have been made and such disclosure and filings contained no material misrepresentation as at the respective dates thereof;

- (bb) all forward-looking information and statements of the Corporation contained in the Prospectus and the assumptions underlying such information and statements, subject to any qualifications contained therein, including any forecasts and estimates, expressions of opinion, intention and expectation, as at the time they were or will be made, were or will be made or based on assumptions that are reasonable;
- (cc) the statistical, industry and market related data included in the Prospectus are derived from sources which the Corporation reasonably believes to be accurate, reasonable and reliable, and such data agrees in all material respects with the sources from which it was derived;
- (dd) the Corporation has no knowledge of any legislation, or proposed legislation (published by a legislative body), which it anticipates will materially and adversely affect the business, affairs, operations, assets, liabilities (contingent or otherwise) or prospects of the Corporation;
- (ee) the Corporation is in material compliance with all Applicable Laws respecting employment and employment practices, terms and conditions of employment, pay equity and wages, except where non-compliance with such laws could not reasonably be expected to have a Material Adverse Effect, and has not and is not engaged in any unfair labour practice;
- (ff) except as properly disclosed in the Offering Documents, there has not been and there is not currently any labour disruption or conflict which could reasonably be expected to have a Material Adverse Effect;
- (gg) the Corporation does not have any loans or other indebtedness outstanding which have been made to any of its officers, directors or employees, past or present, any known holder of more than 10% of any class of shares of the Corporation, or any person not dealing at arm's length with the Corporation that are currently outstanding;
- (hh) except as disclosed in the Disclosure Record, none of the directors, officers or employees of the Corporation, any known holder of more than 10% of any class of shares of the Corporation, or any associate or affiliate of any of the foregoing persons, had or has any material interest, direct or indirect, in any transaction or any proposed transaction that was or is material to the Corporation;
- (ii) the Corporation maintains insurance covering the properties, operations, personnel and businesses of the Corporation as the Corporation reasonably deems adequate; such insurance insures against such losses and risks to an extent which is adequate in the reasonable opinion of management of the Corporation to protect the Corporation and the business of the Corporation; all such insurance is fully in force on the date hereof and will be fully in force on the Closing Date; and the Corporation has no reason to believe that it will not be able to renew any such insurance as and when such insurance expires;
- (jj) the Corporation (i) is in compliance with any and all Applicable Laws relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants ("Environmental Laws"), (ii) has received all permits, licenses or other approvals required under applicable Environmental Laws to conduct its business, (iii) is in compliance with all terms and conditions of any such permit, license or approval, (iv) to the knowledge of the Corporation, there have been no past, and there are no pending or threatened claims, complaints, notices or requests for information received by the Corporation with respect to any alleged material violation of any Environmental Law, and (v) to the knowledge of the Corporation, no conditions exist at, on or under which, with the passage of time, or the giving of notice or both, would give rise to liability under any Environmental Law; except where such non-compliance, failure to receive a permit, licence or other approval, claim or condition would not, singly or in the aggregate, have or would be expected to have a Material Adverse Effect on the Corporation;

- (kk) no order, ruling or determination having the effect of suspending the sale or ceasing the trading in any securities of the Corporation has been issued by any securities regulatory authority and is continuing in effect and no proceedings for that purpose have been instituted or, to the knowledge of the Corporation, are pending, contemplated or threatened by any securities regulatory authority;
- (ll) the Corporation has not made any loans to, or guaranteed the obligations of, any person;
- (mm) with respect to each of the premises of the Corporation which is material to the Corporation and which the Corporation occupies as tenant (the "Leased Premises"), the Corporation has the right to occupy and use such Leased Premises, and each of the leases pursuant to which the Corporation occupies the Leased Premises are in good standing and in full force and effect, and neither the Corporation nor any other party thereto is in breach of any material covenants, conditions or obligations contained therein;
- (nn) there have not been and there are not currently any material disagreements with any of the employees of the Corporation which are adversely affecting the carrying on of the business of the Corporation;
- (oo) there is no action, suit, proceeding, inquiry or investigation before or brought by any court or governmental agency or body, domestic or foreign, including, for the avoidance of doubt, any Regulatory Authority, now pending or threatened against or affecting the Corporation, which would cause a Material Adverse Effect;
- (pp) the Transfer Agent at its principal offices in the City of Toronto has been duly appointed as registrar and transfer agent for the Common Shares;
- (qq) neither the Corporation, nor to the knowledge of the Corporation, any director, officer, agent, employee or other person associated with or acting on behalf of the Corporation has: (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; (ii) made any direct or indirect unlawful payment to any foreign or domestic government official or employee from corporate funds; (iii) violated any applicable anti-bribery, export control and economic sanctions laws including any provision of the *Corruption of Foreign Officials Act* (Canada) or the *United States Foreign Corrupt Practice Act*; or (iv) made any bribe, rebate, payoff, influence payment, kickback or other unlawful payment;
- the Corporation holds all of the permits, licenses and like authorizations necessary for it to carry on its business in each jurisdiction where such business is carried on that are material to the conduct of the business of the Corporation (as such business is currently conducted), including, but not limited to, permits, licenses and like authorizations from Regulatory Authorities (collectively, the "Material Permits"); all such Material Permits which are so required are valid and subsisting and in good standing and none of the same contains any term, provision, condition or limitation which has or would reasonably be expected to affect or restrict in a materially adverse manner the operation of the business of the Corporation, as now carried on or proposed to be carried on, as set out in the Prospectus, and the Corporation is not in breach thereof or in default with respect to filings to be effected or conditions to be fulfilled in order to maintain such Material Permits in good standing;

- (ss) the Corporation is and at all times has been in material compliance with each Material Permit held by it and is not in violation of, or in default under, any such Material Permit in any material respect, except in any case where the Corporation has received a valid and effective waiver of such violation or default:
- (tt) all clinical studies, tests and trials being conducted by or on behalf of the Corporation that have been or will be submitted to any governmental entity, including any Regulatory Authority, including in Canada and the European Union, in connection with any Material Permits, are being or have been conducted by the Corporation or, to the knowledge of the Corporation, are being or have been conducted on behalf of the Corporation, in compliance in all material respects with applicable experimental protocols, procedures and controls pursuant to generally accepted professional scientific standards and applicable local, provincial, state, federal and foreign legal requirements, rules and regulations (including Applicable Laws administered by the Regulatory Authorities);
- (uu) the results of the clinical studies, tests and trials being conducted by or on behalf of the Corporation described in the Prospectus are accurate and complete in all material respects and, to the knowledge of the Corporation, there are no other trials, studies or tests, the results of which could reasonably call into question the results described or referred to in the Prospectus; and the Corporation has not received any notices or other correspondence from such Regulatory Authorities or any other governmental agency or any other person requiring the termination, suspension or material modification of any research, pre-clinical and clinical validation studies or other studies and tests that are described in the Prospectus or the results of which are referred to therein:
- (vv) except (i) with respect to Intellectual Property to which ownership is not statutorily protected, (ii) reversionary and moral rights, and (iii) for the Intellectual Property identified in Schedule "C", the Corporation is the sole legal and beneficial owner of, has good and marketable title to, and owns all right, title and interest in and to all Corporation IP free and clear of all encumbrances, charges, covenants, conditions, options to purchase and restrictions or other adverse claims or interest of any kind or nature, and the Corporation has no knowledge of any claim of adverse ownership in respect thereof;
- (ww) Schedule "B" to this Agreement contains, among other things, a true and complete list of all active (including reinstatable) applied for and registered Patents and Trademarks owned by the Corporation;
- to the Corporation's knowledge, there is no Intellectual Property, other than the Intellectual Property which the Corporation owns and licenses, that is required to permit the Corporation to substantially carry on its present business as described in the Prospectus, and the Corporation has no knowledge of any Intellectual Property owned by another person that is required to permit the Corporation to substantially carry on its business as described in the Prospectus and to which the Corporation knows it cannot obtain a license;

- (yy) the licenses identified at Schedule "C" do not materially impede, restrict or prevent the conduct of the business of the Corporation as described in the Prospectus;
- the Corporation has not received any notice or claim (whether written, oral or otherwise) challenging the Corporation's ownership or right to use any of the Corporation IP or suggesting that any other person has any claim of legal or beneficial ownership or other claim or interest with respect thereto, nor, to the knowledge of the Corporation, is there a reasonable basis for any claim that any person other than the Corporation has any claim of legal or beneficial ownership or other claim or interest in any of the Corporation IP, except for the Intellectual Property identified in Schedule "C";
- (aaa) all active Applied for Corporation IP and active Registered Corporation IP is, to the knowledge of the Corporation, in good standing, is recorded in the name of the Corporation and has been filed in a timely manner in the appropriate offices to preserve the rights thereto (if any) and, in the case of a provisional application, the Corporation confirms that all right, title and interest in and to the potential invention(s) disclosed in such application have been or as of the Closing Date will be assigned in writing (without any express right to revoke such assignment) to the Corporation. To the knowledge of the Corporation, there has been no public disclosure, sale or offer for sale by the Corporation of any invention described in each of the Corporation IP anywhere in the world that would prevent the valid issue of a registration from that Corporation IP in the corresponding jurisdiction;
- (bbb) all material prior art or other information known to the Corporation relating to the Corporation IP has been disclosed to the appropriate offices if and to the extent such disclosure is required to comply with the Applicable IP Laws in the jurisdictions where the corresponding applications are pending;
- (ccc) to the knowledge of the Corporation, all active Registered Corporation IP has been filed, prosecuted and obtained in accordance with the corresponding Applicable IP Laws and is currently in effect and in compliance with such Applicable IP Laws;
- (ddd) to the knowledge of the Corporation, and except for (i) provisional patent applications which were filed more than one year ago, and (ii) any inactive Intellectual Property identified in Schedule "B", no Applied for Corporation IP or Registered Corporation IP has expired, become abandoned, been cancelled or expunged, or has lapsed for failure to be renewed or maintained;
- (eee) to the knowledge of the Corporation, the conduct of the business of the Corporation (including the use or other exploitation of the Corporation IP by the Corporation or other licensees) has not infringed, violated or misappropriated any Intellectual Property right of any person;
- (fff) the Corporation is not a party to any legal action or legal proceeding, nor has the Corporation received notice of any legal action or legal proceeding being threatened, that alleges that any current or proposed conduct of the Corporation's business (including the use or other exploitation of any Corporation IP by the Corporation or any customers, distributors or other licensees) has or will infringe, violate or misappropriate any Intellectual Property right of any person;

- (ggg) to the knowledge of the Corporation, no person has infringed upon, misappropriated, illegally exported, or violated any of the Corporation's rights in the Corporation IP;
- (hhh) the Corporation has entered into agreements pursuant to which the Corporation has been granted licenses or permissions to one or more of make, use, reproduce, sub license, manufacture, sell, modify, update, enhance or otherwise exploit the Licensed IP to the extent required to operate the business of the Corporation currently conducted (including, if required, the right to incorporate such Licensed IP into the Corporation's products) as described in the Prospectus. To the knowledge of the Corporation, any Licensed IP that was terminated in the past 6 months is not material to the business of the Corporation;
- (iii) to the extent that any of the non-publicly disclosed Corporation IP is disclosed to any person or any person has access to such Corporation IP (including any employee, officer, shareholder or consultant of the Corporation), the Corporation has entered into an agreement which contains customary terms and conditions with respect to the use and disclosure of such Corporation IP. In each case in accordance with their respective terms, neither the Corporation nor, to the knowledge of the Corporation, any other person is in default of its obligations thereunder with respect to the terms and conditions relating to use and disclosure of Corporation IP;
- (jjj) the Corporation has taken all actions that it is contractually obligated to take and all actions that are customary and reasonable to protect the confidentiality of the Corporation IP that it treats as confidential;
- (kkk) to the knowledge of the Corporation, it is not, and will not be, necessary for the Corporation to utilize any Intellectual Property owned by or in possession of any of its employees that was made prior to their employment with the Corporation in a manner that is in violation of the rights of such employee or the rights of his or her prior employers;
- (III) the Corporation has not received any opinion from its legal counsel that any of the active Registered Corporation IP or Applied for Corporation IP is clearly, but not as a result of any prior art, invalid, unregistrable, or unenforceable in the case of Registered Corporation IP;
- (mmm) the Corporation has not received any grant relating to research and development which is subject to repayment in whole or in part or to conversion to debt upon sale of any Common Shares or which may affect the right of ownership of the Corporation in the Corporation IP;
- (nnn) the Corporation requires each of its employees and consultants to execute a non-disclosure agreement containing customary terms and conditions for agreements of this nature, and all current employees and consultants of the Corporation have executed such agreement and, to the knowledge of the Corporation, all past employees and consultants of the Corporation have executed such agreement;
- (000) all of the present and past employees of the Corporation, and all of the present and past consultants, contractors and agents of the Corporation performing services relating to the conception, discovery, making or development of the Corporation IP, have entered into a written agreement assigning or requiring assignment to the Corporation of, or confirming that the Corporation owns all right, title and interest in and to all such Intellectual Property and, with respect to any Corporation IP in which moral rights subsist, waiving all moral rights in such Intellectual Property in favour of the Corporation;

- (ppp) any and all fees or payments required to keep the Registered Corporation IP and, to the knowledge of the Corporation, the registered Licensed IP active have been paid, except those which the Corporation has decided to let lapse;
- (qqq) there are no ongoing Intellectual Property disputes, settlement negotiations, settlement agreements or communications relating to the foregoing between the Corporation and any other persons relating to or potentially relating to the business of the Corporation which have not been resolved;
- (rrr) the Corporation has conducted and is conducting its business in compliance in all material respects with all Applicable Laws of each jurisdiction in which it carries on business and has not received a notice of non-compliance, nor knows of, nor has reasonable grounds to know of, any facts that could give rise to a notice of non-compliance with any such Applicable Laws which would have a Material Adverse Effect;
- (sss) except pursuant to the licenses identified in Schedule "C", the Corporation has no knowledge of any reason why it would not be entitled to make use of or commercially exploit the Corporation IP. With respect to any license that is material to its business by which the Corporation has obtained the rights to exploit, in any way, the Licensed IP rights or by which the Corporation has granted to any third party the right to so exploit such Licensed IP:
  - (i) such license is in operation and enforceable in accordance with its terms, except to the extent that enforceability may be limited by: (A) applicable bankruptcy, insolvency, reorganization, moratorium, and other laws of general application affecting enforcement of creditors' rights generally; or (B) laws relating to the availability of specific performance, injunctive relief, or other equitable remedies, and no event of default has occurred and is continuing under any such license or agreement;
  - (ii) (A) the Corporation has not received any notice of termination or cancellation under such license, and no party thereto has any right of termination or cancellation thereunder except in accordance with its terms; (B) the Corporation has not received any notice of a breach or default under such license which breach or default has not been cured; and (C) the Corporation has not granted to any other person any rights contrary to, or in conflict with, the terms and conditions of such license;
  - (iii) the Corporation has no knowledge of any other party to such license or agreement that is in breach or default thereof, and has no knowledge of any event that has occurred that, with notice or lapse of time would constitute such a breach or default or permit termination, modification or acceleration under such license or agreement;
- (ttt) none of the Corporation nor any of its predecessors has had the registration of a class of securities under the U.S. Exchange Act revoked by the United States Securities Exchange Commission pursuant to Section 12(j) of the U.S. Exchange Act and any rules or regulations promulgated thereunder;

- (uuu) the operations of the Corporation are and have been conducted at all times in compliance with, in each case to the extent applicable, the financial recordkeeping and reporting requirements of the *United States Currency and Foreign Transactions Reporting Act of 1970*, the *Proceeds of Crime (Money Laundering)* and *Terrorist Financing Act (Canada*), the anti-money laundering statutes of all jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "Anti-Money Laundering Laws"), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Corporation with respect to the Anti-Money Laundering Laws is pending or, to the knowledge of the Corporation, threatened; and
- (vvv) neither the Corporation, nor, to the knowledge of the Corporation, any director, officer, agent, employee or affiliate of the Corporation is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC") and the Corporation will not directly or indirectly use the proceeds of the Offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

## 8. Closing

The purchase and sale of the Offered Units shall be completed at the Closing Time at the offices of counsel to the Corporation, Borden Ladner Gervais LLP, Toronto, Ontario, or at such other place or places as the Agent and the Corporation may agree. At the Closing Time, the Corporation shall: (a) deliver to the Agent certificates in definitive form and/or book-entry only securities in accordance with the "non-certificated inventory" rules and procedures of CDS representing the Offered Units registered in the name of CDS & Co. or in such other name or names as shall be designated by the Agent; and (b) with respect to Purchasers in the United States that are Institutional Accredited Investors which have expressly requested Warrant Certificates, deliver to the Agent Warrant Certificates registered as the agent may direct the Corporation in writing, against payment by the Agent to the Corporation of the aggregate purchase price payable to the Corporation for the Offered Units by certified cheque, bank draft or wire transfer. The payment made to the Corporation will be net of the Agency Fee and net of amounts payable to the Agent's legal counsel, Baker & McKenzie LLP, and out-of-pocket expenses of the Agent incurred in connection with the Offering (which expenses shall be borne by the Corporation), as more fully set out in Section 14. In addition, the Corporation shall, at the Closing Time, issue to the Agent the Compensation Warrant Certificates.

If the aggregate gross proceeds to the Corporation from the Initial Closing is equal to or greater than the Minimum Offering, the Corporation and the Agent may agree from time to time to hold additional Closings on or prior to 45 days following the date of issuance of the Final Receipt to issue additional Offered Units until such time as the aggregate gross proceeds to the Corporation is equal to the Maximum Offering. Any such additional closing shall be referred to as a "Subsequent Closing" and shall be conducted in the same manner as the Initial Closing. At any Subsequent Closing, the Corporation and the Agent shall make all necessary payments and the Corporation shall, at its sole expense, deliver all of the certificates, opinions and other documents to be delivered by it on the Initial Closing Date, each updated to the date of any such Subsequent Closing.

# 9. Closing Conditions

The Agent's obligation to complete the Closing at the Closing Time shall be subject to the accuracy of the representations and warranties of the Corporation contained in this Agreement and in certificates required to be delivered by the Corporation hereunder as of the date of this Agreement and as of the Closing Date, the performance by the Corporation of its obligations under this Agreement and the following conditions:

- (a) the Agent shall have received opinions, dated the Closing Date, of the Corporation's Canadian counsel, Borden Ladner Gervais LLP, the Corporation's U.S. counsel, Dorsey & Whitney LLP, as applicable, and any other local counsel, in form and substance satisfactory to the Agent, acting reasonably (it being understood that such counsel may rely to the extent appropriate in the circumstance: (i) as to matters of fact, on certificates of the Corporation executed on its behalf by a senior officer of the Corporation and on certificates of the Transfer Agent, as to the issued capital of the Corporation; and (ii) as to matters of fact not independently established, on certificates of public officials) with respect to the following matters (with such opinions being subject to usual and customary assumptions and qualifications, including the qualifications set out below):
  - (i) as to the incorporation and subsistence of the Corporation under the laws of the Province of Ontario and as to the corporate power of the Corporation to carry out its obligations under this Agreement and to issue the securities as contemplated by this Agreement;
  - (ii) as to the authorized and issued capital of the Corporation;
  - (iii) that the Corporation has all requisite corporate power and authority under the laws of its jurisdiction of incorporation to carry on its business and to own or lease its properties and assets as described in the Prospectus;
  - (iv) that none of the execution and delivery of this Agreement, the Warrant Indenture, the Warrant Certificates, and the Compensation Warrant Certificates and the performance by the Corporation of its obligations hereunder, or the sale or issuance of the Unit Shares, the Warrants, the Warrant Shares, the Compensation Warrants, the Compensation Shares, the Over-Allotment Warrants and the Over-Allotment Warrant Shares will conflict with or result in any breach of the articles or by-laws of the Corporation;
  - (v) that each of this Agreement, the Warrant Indenture, the Warrant Certificates, and the Compensation Warrant Certificates have been duly authorized and executed and delivered by the Corporation, and constitutes a valid and legally binding obligation of the Corporation enforceable against it in accordance with its terms, except as enforcement thereof may be limited by bankruptcy, insolvency, liquidation, reorganization, moratorium or similar laws affecting the rights of creditors generally and except as limited by the application of equitable principles when equitable remedies are sought, and the qualification that the enforceability of rights of indemnity and contribution may be limited by Applicable Law:
  - (vi) all necessary corporate action has been taken by the Corporation to authorize the execution and delivery of the Prospectus and any Prospectus Amendment and the filing of such documents as are required under Applicable Securities Laws in each of the Canadian Selling Jurisdictions;
  - (vii) no consent, approval, authorization or order of or filing, registration or qualification with any court, governmental agency or body or securities regulatory authority having jurisdiction is required at this time for the execution and delivery by the Corporation of this Agreement, the Warrant Indenture, the Warrant Certificates, the Over-Allotment Warrant Certificates or the Compensation Warrant Certificates and the performance of its obligations hereunder and thereunder, except for such as have been made or obtained;

- (viii) that the Unit Shares, have been validly issued as fully paid and non-assessable securities in the capital of the Corporation;
- (ix) that the Warrants the Over-Allotment Warrants and Compensation Warrants have been duly and validly created and issued;
- (x) that the Warrant Shares have been authorized and allotted for issuance and, upon the issuance of the Warrant Shares following due exercise of the Warrants in accordance with the terms thereof, the Warrant Shares will be validly issued as fully paid and non-assessable securities in the capital of the Corporation;
- (xi) that the Compensation Shares have been authorized and allotted for issuance and, upon the issuance of the Compensation Shares following due exercise of the Compensation Warrants in accordance with the terms thereof, the Compensation Shares will be validly issued as fully paid and non-assessable securities in the capital of the Corporation;
- (xii) that the Over-Allotment Shares have been authorized and allotted for issuance and, upon the issuance of the Over-Allotment Shares following due exercise of the Over-Allotment Option in accordance with the terms thereof, the Over-Allotment Shares will be validly issued as fully paid and non-assessable securities in the capital of the Corporation;
- (xiii) that the Over-Allotment Warrant Shares have been authorized and allotted for issuance and, upon the issuance of the Over-Allotment Warrant Shares following due exercise of the Over-Allotment Warrants in accordance with the terms thereof, the Over-Allotment Warrant Shares will be validly issued as fully paid and non-assessable securities in the capital of the Corporation;
- (xiv) all approvals, permits, consents, orders and authorizations have been obtained, all necessary documents have been filed and all other legal requirements have been fulfilled under Applicable Securities Laws of the Canadian Selling Jurisdictions to qualify the issuance or Distribution and sale of the Qualified Securities to the public in each of the Canadian Selling Jurisdictions and the Compensation Warrants to the Agent and to permit the issuance, sale and delivery of the Qualified Securities to the public through dealers registered under the Applicable Laws of each of the Canadian Selling Jurisdictions who have complied with the relevant provisions of such laws and the terms of their registration;
- (xv) subject to the qualifications, assumptions, limitations and understandings set out therein, the statements set out in the Prospectus, under the heading "Eligibility for Investment" are true and correct as at the date of the Prospectus;
- (xvi) subject to the qualifications, assumptions, limitations and understandings set out therein, the statements set out in the Prospectus, under the headings "Eligibility for Investment" and "Certain Canadian Federal Income Tax Considerations" are true and correct as at the date of the Prospectus;

- (xvii) subject to the qualifications, assumptions, limitations and understandings set out therein, the statements set out in the Prospectus, under the heading "Certain United States Federal Income Tax Considerations", to the extent that such statements purport to constitute summaries of matters of law or regulation or legal conclusions, have been reviewed and fairly summarize the matters described therein in all material respects;
- (xviii) that the Final Prospectus was declared effective by the SEC under the U.S. Securities Act, and no stop order suspending its effectiveness has been issued by the SEC, nor, to the knowledge of the Corporation's U.S. counsel, is a proceeding for that purpose pending before or contemplated or threatened by the SEC;
- (xix) that the attributes of the Common Shares conform in all material respects with the description thereof contained in the Prospectus;
- (xx) that the Offering has been conditionally accepted by the TSX, subject only to Standard Listing Conditions;
- (xxi) the Unit Shares, Warrant Shares, Over-Allotment Warrant Shares, Over-Allotment Shares and Compensation Shares have been duly authorized by the Company for listing and trading on the NASDAQ and the TSX; and
- (xxii) as to such other matters as the Agent's legal counsel may reasonably request prior to the Closing Time;
- (b) the Agent shall have received the Unit Shares, the Warrants, and the Compensation Warrants (in physical or electronic form, subject to compliance with Applicable Securities Laws, and as the Agent may advise);
- (c) the Agent shall have received an incumbency certificate dated the Closing Date including specimen signatures of the President and Chief Executive Officer, the Chief Financial Officer and any other officer of the Corporation signing this Agreement or any document delivered hereunder;
- (d) the Agent shall have received a certificate dated the Closing Date of the President and Chief Executive Officer and the Chief Financial Officer of the Corporation or other officers of the Corporation acceptable to the Agent, to the effect that, to the best of their knowledge, information and belief, after due inquiry and without personal liability:
  - the representations and warranties of the Corporation contained in this Agreement are true and correct in all respects as if made at and as of the Closing Time;
  - the Corporation has complied with and satisfied the covenants, terms and conditions of this Agreement on its part to be complied with and satisfied up to the Closing Time;
  - (iii) the constating documents of the Corporation delivered at Closing are full, true and correct copies, unamended, and in effect on the date thereof;

- (iv) the minutes or other records of various proceedings and actions of the Corporation's board of directors relating to the Offering and delivered at Closing are full, true and correct copies thereof and have not been modified or rescinded as of the date thereof;
- (v) no order, ruling or determination having the effect of suspending the sale or ceasing the trading of the Common Shares or any other securities of the Corporation has been issued by any stock exchange, securities commission or securities regulatory authority and is continuing in effect and no proceedings for that purpose have been instituted or are pending;
- (vi) since the respective dates as of which information is given in the Prospectus as amended by any Prospectus Amendment: (A) there has been no material change (actual, anticipated, contemplated, proposed or threatened, whether financial or otherwise) in the business, financial condition, affairs, operations, business prospects, assets, liabilities or obligations (contingent or otherwise) or capital of the Corporation; and (B) other than the Offering and except as disclosed in the Prospectus or any Prospectus Amendment, as the case may be, no transaction has been entered into by the Corporation which constitutes a material change as defined in Applicable Securities Laws of the Canadian Selling Jurisdictions;
- (vii) none of the documents filed with applicable securities regulatory authorities since January 1, 2016, contained a misrepresentation as at the time the relevant document was filed that has not since been corrected; and
- (viii) there are no contingent liabilities affecting the Corporation which are material to the Corporation, other than as disclosed in the Final Prospectus or any Prospectus Amendment, as the case may be;
- (e) the Agent shall have received a comfort letter dated the Closing Date, in form and substance satisfactory to the Agent from the Corporation's Auditors, confirming the continued accuracy of the comfort letter to be delivered to the Agent pursuant to subsection 4(a)(v) with such changes as may be necessary to bring the information in such letter forward to a date not more than two Business Days prior to the Closing Date, which changes shall be acceptable to the Agent;
- (f) the Corporation's board of directors shall have authorized and approved the execution and delivery of this Agreement, the Warrant Indenture, the Warrant Certificates, and the Compensation Warrant Certificates, the allotment, issuance and delivery of the Unit Shares, Over-Allotment Shares and the Over-Allotment Warrant Shares and the creation and issuance of the Warrants, Over-Allotment Warrants and Compensation Warrants and, upon the due exercise of the Warrants, Over-Allotment Warrants and the Compensation Warrants, the allotment, issuance and delivery of the Warrant Shares, Over-Allotment Shares and the Compensation Shares, as the case may be, and all matters relating thereto;
- (g) the Corporation shall have received the conditional approval from the TSX for the listing of the Unit Shares, Warrant Shares, Over-Allotment Shares, Over-Allotment Warrant Shares and Compensation Shares for trading on the TSX and the Corporation shall have properly notified NASDAQ for the listing of the Unit Shares, Warrant Shares, Over-Allotment Shares, Over-Allotment Warrant Shares and Compensation Shares for trading on the NASDAQ;

- (h) the Corporation shall not have received any notice from the TSX or from NASDAQ that the Unit Shares, the Warrant Shares, the Over-Allotment Shares, the Over-Allotment Warrant Shares, or the Compensation Shares shall not be accepted for listing on the TSX or NASDAQ;
- (i) that final acceptance of the Offering by the TSX shall be subject only to the fulfilment of Standard Listing Conditions;
- (j) the Agent shall have received confirmation from the Corporation that the Corporation is not on the defaulting issuer's list (or equivalent) maintained by the Canadian Securities Regulators in the Canadian Selling Jurisdictions;
- (k) the Agent shall have received a certificate of good standing or equivalent thereof in respect of the Corporation;
- (l) the Agent and its counsel shall have been provided with all information and documentation reasonably requested relating to their due diligence inquiries and investigations;
- (m) the Corporation will have made and/or obtained the necessary filings, approvals, consents and acceptances of the appropriate securities regulatory authorities required to be made or obtained by the Corporation in connection with the sale of the Qualified Securities to the Purchasers prior to the Closing Time; as herein contemplated, it being understood that the Agent shall do all that is reasonably required to assist the Corporation to fulfil this condition, subject only to the Standard Listing Conditions and any post-Closing notice filings under applicable United States federal or state securities laws; and
- (n) the Agent shall have received a certificate from the Transfer Agent as to the number of Common Shares issued and outstanding as at a date no more than two Business Days prior to the Closing Date.

The Corporation agrees that the aforesaid legal opinions and certificates to be delivered at the Closing Time will be addressed to the Agent and the Agent's counsel.

# 10. Exercise of Over-Allotment Option

The Agent may exercise the Over-Allotment Option, in whole or in part, at any time and from time to time prior to the Over-Allotment Expiry Date by delivery of written notice to the Corporation of the number of Over-Allotment Securities in respect of which the Over-Allotment Option is being exercised and the date for delivery of the Over-Allotment Securities (an "Over-Allotment Option Notice"). The Over-Allotment Option Closing Date shall be determined by the Agent but shall not be earlier than two business days or later than seven business days after delivery of the Over-Allotment Option Notice. In the event the Over-Allotment Option is exercised prior to the Initial Closing Date, the Over-Allotment Closing shall take place together with the Initial Closing on the Initial Closing Date. Upon exercise of the Over-Allotment Option as provided herein the Corporation shall become obligated to sell the total number of Over-Allotment Securities in respect of which the Agent is exercising the Over-Allotment Option.

Any such closing shall be referred to as a "Over-Allotment Closing" and shall be conducted in the same manner as the Initial Closing. At any Over-Allotment Closing, the Corporation and the Agent shall make all necessary payments and the Corporation shall, at its sole expense, deliver all of the certificates, opinions and other documents to be delivered by it on the Initial Closing Date, each updated to the date of any such Over-Allotment Closing.

#### 11. All Terms to be Conditions

The Corporation agrees that the conditions contained in this Agreement, including those terms in Section 9, will be construed as conditions and any breach or failure to comply with any of the conditions shall entitle the Agent to terminate its obligations hereunder by written notice to that effect given to the Corporation at or prior to the Closing Time. It is understood that the Agent may waive, in whole or in part, or extend the time for compliance with, any of such terms and conditions without prejudice to the rights of the Agent in respect of any such terms and conditions or any other or subsequent breach or non-compliance of the Corporation, provided that to be binding on the Agent, any such waiver or extension must be in writing and signed by the Agent.

### 12. Rights of Termination

Without limiting any of the other provisions of this Agreement, the Agent will be entitled, at its option, to terminate and cancel, without any liability on its part or on the part of the Purchasers, its obligations under this Agreement by giving written notice to the Corporation at any time prior to the Closing Time if, after the date hereof and at any time prior to the Closing:

- (a) there shall have occurred any change in any material fact, material change (actual, intended, anticipated or threatened) or the Agent shall have discovered any previously undisclosed material fact (determined by the Agent in its sole discretion, acting reasonably) in relation to the Corporation, which, in the opinion of the Agent, acting reasonably, prevents or restricts trading in the securities of the Corporation or the Distribution of the Qualified Securities or has or could reasonably be expected to have a Material Adverse Effect;
- (b) there shall have occurred any change in the Applicable Securities Laws of any Selling Jurisdiction or any inquiry, investigation or other proceeding by a securities regulatory authority or any order is issued under or pursuant to any statute of Canada or any province thereof, or the SEC, or any stock exchange in relation to the Corporation or any of its securities (except for any inquiry, investigation or other proceeding based upon activities of the Agent and not upon activities of the Corporation), which, in the reasonable opinion of the Agent, would be expected to have a significant adverse effect on the market price of value of the Offered Units or the Common Shares;
- (c) there should develop, occur or come into effect or existence any event, action, state, condition or major financial occurrence or catastrophe, accident, public protest, government law or regulation, war or act of terrorism of national or international consequence or any law or regulation which, in the opinion of the Agent, seriously adversely affects or involves, or will seriously adversely affect, or involve, the financial markets or the business, operations or affairs of the Corporation or the market price of value of the Offered Units or the Common Shares;
- (d) the state of the financial markets in Canada and the United States is such that, in the reasonable opinion of the Agent, the Offered Units cannot be marketed profitably;
- (e) there is an inquiry or investigation (whether formal or informal) by any Securities Regulator or other regulatory authority in relation to the Corporation or any one of its directors or officers, or any of its principal shareholders, which has not been rescinded, revoked or withdrawn and which, in each case, operates to materially prevent or restrict the Distribution of the Qualified Securities as contemplated by this Agreement;

- (f) a cease trading order with respect to any securities of the Corporation is made by any Securities Regulator or other competent authority by reason of the fault of the Corporation or its directors, officers and agents and such cease trading order has not been rescinded, revoked or withdrawn;
- (g) the Agent, acting reasonably, is not satisfied in its sole discretion with its due diligence review and investigations;
- (h) the Corporation is in breach of a material term, condition or covenant of this Agreement or any representation or warranty given by the Corporation in this Agreement becomes or is false or misleading; and
- (i) the Corporation receives notice from the TSX or NASDAQ that the Unit Shares, Warrant Shares, Over-Allotment Shares, Over-Allotment Warrant Shares and/or Compensation Shares shall not be accepted for listing on the TSX or NASDAQ.

The rights of termination contained herein are in addition to any other rights or remedies that the Agent may have in respect of any default, act or failure to act or non-compliance by the Corporation in respect of any of the matters contemplated by this Agreement or otherwise.

In the event of any such termination, there shall be no further liability on the part of the Agent to the Corporation or on the part of the Corporation to the Agent except in respect of any liability which may have arisen prior to or arise after such termination under any or both of Sections 13 and 14.

## 13. Indemnity and Contribution

The Corporation agrees to indemnify and hold harmless the Agent and each Selling Firm (provided that each such Selling Firm is in material compliance with the covenants and obligations of the Agent set forth in Section 3 herein (as if such Selling Firm were an Agent), to the extent applicable) and each of their subsidiaries and affiliates, and each of their respective directors, officers, employees, shareholders, partners, advisors and agents (collectively, the "Indemnified Parties" and each, an "Indemnified Party"), to the full extent lawful, from and against any and all losses (except loss of profit), claims, actions, suits, proceedings, damages, liabilities or expenses of whatsoever nature or kind, including the aggregate amount paid in reasonable settlement of any actions, suits, proceedings, investigations or claims and the reasonable fees and expenses of their counsel in connection with any action, suit, proceeding, investigation or claim that may be made or threatened against any Indemnified Party or in enforcing this indemnity (collectively, the "Claims") to which an Indemnified Party may become subject or otherwise involved in any capacity insofar as the Claims relate to, are caused by, result from, arise out of or are based upon, directly or indirectly, the performance of professional services rendered to the Corporation by an Indemnified Party hereunder or otherwise in connection with the matters referred to in this Agreement, whether performed before or after the Corporation's execution of this Agreement, including in connection with Claims relating to or arising from the following:

- (a) any information or statement (except any information or statement relating solely to or provided by the Agent) contained in the Offering Documents, which at the time and in light of the circumstances under which it was made contains or is alleged to contain a misrepresentation or any omission or any alleged omission to state therein any fact or information (except facts or information relating solely to the Agent and provided by the Agent) required to be stated therein or necessary to make any of the statements therein not misleading in light of the circumstances in which they are made;
- (b) the omission or alleged omission to state in any certificate of the Corporation or of any officers of the Corporation delivered in connection with the Offering any material fact (except facts or information relating solely to the Agent and provided by the Agent) required to be stated therein where such omission or alleged omission constitutes or is alleged to constitute a misrepresentation;
- (c) any order made or any inquiry, investigation or proceeding commenced or threatened by any securities regulatory authority, stock exchange or by any other competent authority, based upon any misrepresentation (as defined in the Securities Act (Ontario)) or alleged misrepresentation (except a misrepresentation relating solely to the Agent and provided by the Agent) in the Offering Documents (except any document or material delivered or filed solely by the Agent) based upon any failure or alleged failure to comply with Applicable Securities Laws (other than any failure or alleged failure to comply by the Agent) preventing and restricting the trading in or the sale of the Offered Units in any of the Selling Jurisdictions;
- (d) the non-compliance or alleged non-compliance by the Corporation with any material requirement of Applicable Securities Laws, including the Corporation's non-compliance with any statutory requirement to make any document available for inspection; or
- (e) material breach of any representation, warranty or covenant of the Corporation contained in this Agreement or the failure of the Corporation to comply in all material respects with any of its obligations hereunder or thereunder,

and further agrees to immediately reimburse each Indemnified Party forthwith, upon demand, for any legal or other expenses reasonably incurred by such Indemnified Party in connection with any Claim.

The Corporation also agrees that no Indemnified Party shall have any liability (either direct or indirect, in contract or tort or otherwise) to the Corporation or any person asserting Claims on the Corporation's behalf or in right for or in connection with the performance of professional services rendered to the Corporation by an Indemnified Party hereunder or otherwise in connection with the matters referred to in this Agreement, whether performed before or after the Corporation's execution of the Agreement, except to the extent that any losses, expenses, Claims, actions, damages or liabilities incurred by the Corporation are determined by a court of competent jurisdiction in a final judgement that has become non-appealable to have resulted from the Indemnified Party's breach of this Agreement, or the gross negligence, wilful misconduct, fraud or dishonesty of such Indemnified Party.

In the event and to the extent that a court of competent jurisdiction in a final judgement that has become non-appealable determines that an Indemnified Party breached this Agreement, or was grossly negligent or guilty of wilful misconduct, fraud or dishonesty in connection with a Claim in respect of which the Corporation has advanced funds to the Indemnified Party pursuant to this indemnity, such Indemnified Party shall immediately reimburse such funds to the Corporation and thereafter this indemnity shall not apply to such Indemnified Party in respect of such Claim.

The Corporation agrees to waive any right the Corporation might have of first requiring the Indemnified Party to proceed against or enforce any other right, power, remedy or security or claim payment from any other person before claiming under this indemnity.

In case any Claim is brought against an Indemnified Party, the Indemnified Party will give the Corporation prompt written notice of any such Claim of which the Indemnified Party has knowledge and the Corporation will undertake the investigation and defence thereof on behalf of the Indemnified Party, including the prompt employment of counsel acceptable to the Indemnified Parties affected and the payment of all expenses. Failure by the Indemnified Party to so notify shall not relieve the Corporation of its obligation of indemnification hereunder unless (and only to the extent that) such failure results in the forfeiture by the Corporation of substantive rights or defences or the extent that the Corporation is materially prejudiced thereby.

No admission of liability and no settlement, compromise or termination of any Claim shall be made without the Corporation's consent and the consent of the Indemnified Parties affected, such consents not to be unreasonably withheld or delayed. No Indemnified Party shall be obliged to enter into any settlement which does not provide a complete release of such Indemnified Party from all further obligations to the claimant.

Notwithstanding that the Corporation will undertake the investigation and defence of any Claim, an Indemnified Party will have the right to employ separate counsel with respect to any Claim and participate in the defence thereof, but the fees and expenses of such counsel will be at the expense of the Indemnified Party unless:

- (a) the employment of such counsel has been authorized in writing by the Corporation;
- (b) the Corporation has not assumed the defence within a reasonable period of time after receiving notice of such Claim;
- (c) the named parties to any such Claim include both the Corporation and the Indemnified Party and the Indemnified Party shall have been advised by counsel that there may be a conflict of interest between the Corporation and the Indemnified Party; or
- (d) the Indemnified Party has been advised in writing by counsel that there are one or more defences available to the Indemnified Party which are different from or in addition to those available to the Corporation, which makes representation by the same counsel inappropriate.

The rights accorded to the Indemnified Parties hereunder shall be in addition to any rights an Indemnified Party may have at common law or otherwise.

If for any reason the foregoing indemnification is unavailable (other than in accordance with the terms hereof) to the Indemnified Parties (or any of them) or insufficient to hold them harmless, then the Corporation shall contribute to the amount paid or payable by the Indemnified Parties as a result of such Claim in such proportion as is appropriate to reflect not only the relative benefits received by the Corporation on the one hand and the Indemnified Parties on the other hand, but also the relative fault of the Corporation and the Indemnified Parties, as well as any other equitable considerations which may be relevant; provided that the Corporation shall, in any event, contribute to the amount paid or payable by the Indemnified Parties as a result of such Claim, any amount in excess of the fees actually received by the Indemnified Parties hereunder in which case such fees and expenses will be for the Corporation's account.

The Corporation hereby acknowledges the Agent as trustee for each of the other Indemnified Parties of the Corporation's covenants under this indemnity with respect to such persons and the Agent agrees to accept such trust and to hold and enforce such covenants on behalf of such persons.

The Corporation agrees to immediately reimburse the Agent monthly for the time spent by an Indemnified Party in connection with any Claim at their reasonable per diem rates. The Corporation also agrees that if any Claim shall be brought against, or an investigation commenced in respect of the Corporation or the Corporation and the Indemnified Parties shall be required to testify, participate or respond in respect of or in connection with the performance of professional services rendered to the Corporation by an Indemnified Party hereunder or otherwise in connection with the matters referred to in this Agreement, the Agent shall have the right to employ its own counsel in connection therewith and the Corporation will immediately reimburse the Agent monthly for the time spent by an Indemnified Party in connection therewith at their reasonable per diem rates together with such fees and disbursements and reasonable out-of-pocket expenses as may be incurred, including the fees and disbursements of the Agent's counsel.

## 14. Expenses

Whether or not the transactions contemplated by this Agreement shall be completed, all expenses of or incidental to the Offering and all expenses of or incidental to all other matters in connection with the transaction set out in this Agreement shall be borne directly by the Corporation, including fees and expenses payable in connection with the qualification of the Offered Units, Over-Allotment Units or Over-Allotment Warrants and the Compensation Warrants for Distribution, fees and disbursements of Canadian counsel to the Agent incurred in connection with the Offering (to a maximum of \$75,000 plus disbursements and applicable taxes), fees and disbursements of United States counsel to the Agent (to a maximum of US \$15,000 plus disbursements and applicable taxes), all fees and disbursements of counsel to the Corporation and local counsel, all fees and expenses of the Corporation's Auditors, the reasonable fees and expenses relating to the marketing of the Qualified Securities (including "road shows"), marketing meetings, marketing documentation and institutional investor meetings) and all reasonable out-of-pocket expenses of the Agent (including the Agent's travel expenses in connection with due diligence, marketing meetings and "road shows") and all costs incurred in connection with the preparation and printing of the Prospectus, any Prospectus Amendment, and certificates representing the Unit Shares, Warrants, Over-Allotment Warrants and Compensation Warrants issued in connection with the Offering. All reasonable expenses incurred by or on behalf of the Agent and all fees and disbursements of counsel to the Agent payable pursuant to the foregoing shall be deducted from the aggregate purchase price for the Qualified Securities in accordance with Section 8.

# 15. Survival of Representations, Warranties, Covenants and Agreements

The representations, warranties, covenants and agreements of the Corporation contained in this Agreement and in any certificate delivered pursuant to this Agreement or in connection with the purchase and sale of the Qualified Securities shall be true and correct at the Closing Time and shall survive the purchase of the Qualified Securities and shall continue in full force and effect until the later of: (i) three years following the Closing Date; and (ii) the latest date under the Applicable Securities Laws in which a Purchaser of Qualified Securities is resident or, if the Applicable Securities Laws do not specify such a date, the latest date under the Limitations Act, 2002 (Ontario).

## 16. Conflict of Interest

The Corporation acknowledges that the Agent and its affiliates carry on a range of businesses, including providing stockbroking, investment advisory, research, investment management and custodial services to clients and trading in financial products as agent or principal. It is possible that the Agent and other entities in its group that carry on those businesses may hold long or short positions in securities of companies or other entities, which are or may be involved in the transactions contemplated in this Agreement and effect transactions in those securities for their own account or for the account of their respective clients. The Corporation agrees that these divisions and entities may hold such positions and effect such transactions without regard to the Corporation's interests under this Agreement.

### 17. Fiduciary

The Corporation hereby acknowledges that the Agent is acting solely as agent in connection with the offer and sale of the Offered Units. The Corporation further acknowledges that the Agent is acting pursuant to a contractual relationship created solely by this Agreement entered into on an arm's length basis, and in no event do the parties intend that the Agent act or be responsible as a fiduciary to the Corporation, its management, shareholders or creditors or any other person in connection with any activity that the Agent may undertake or have undertaken in furtherance of such offer and sale of the Corporation's securities, either before or after the date hereof. The Agent hereby expressly disclaims any fiduciary or similar obligations to the Corporation, either in connection with the transactions contemplated by this Agreement or any matters leading up to such transactions, and the Corporation hereby confirms its understanding and agreement to that effect. The Corporation and the Agent agree that they are each responsible for making their own independent judgments with respect to any such transactions and that any opinions or views expressed by the Agent to the Corporation regarding such transactions, including, but not limited to, any opinions or views with respect to the price or market for the Corporation's securities, do not constitute advice or recommendations to the Corporation. The Corporation and the Agent agree that the Agent will not assume, any advisory responsibility in favour of the Corporation with respect to the transactions contemplated hereby or the process leading thereto (irrespective of whether the Agent has advised or is currently advising the Corporation on other matters). The Corporation hereby waives and releases, to the fullest extent permitted by law, any claims that the Corporation may have against the Agent with respect to any breach or alleged breach of any fiduciary duty to the Corporation in connection with the transactions contemplated by this Agreement.

## 18. Notice

Unless otherwise expressly provided in this Agreement, any notice or other communication to be given under this Agreement (a "Notice") shall be in writing addressed as follows:

If to the Corporation, addressed and sent to:

Titan Medical Inc. 170 University Avenue, Suite 1000 Toronto, Ontario M5H 3B3

Attention: David J. McNally, President and Chief Executive Officer

Email: david.mcnally@titanmedicalinc.com

with a copy (which shall not constitute notice) to:

Borden Ladner Gervais LLP Bay Adelaide Centre, East Tower 22 Adelaide Street West, Suite 3400 Toronto, Ontario M5H 4E3 Attention: Manoj Pundit Fax: (416) 367-6749 Email: mpundit@blg.com

If to the Agent, addressed and sent to:

Bloom Burton Securities Inc. 65 Front Street East, Suite 300 Toronto, Ontario M5E 1B5

Attention: Michael Pollard

Email: mpollard@bloomburton.com

with a copy (which shall not constitute notice) to:

Baker & McKenzie LLP Brookfield Place, Bay/Wellington Tower 181 Bay Street, Suite 2100 Toronto, Ontario M5J 2T3

Attention: David Palumbo Fax: (416) 863-6875

Email: david.palumbo@bakermckenzie.com

or to such other address as any of the persons may designate by Notice given to the others.

Each Notice shall be personally delivered to the addressee or sent by fax or email to the addressee and: (i) a Notice which is personally delivered shall, if delivered on a Business Day, be deemed to be given and received on that day and, in any other case, be deemed to be given and received on the first Business Day following the day on which it is delivered; and (ii) a Notice which is sent by fax or email shall be deemed to be given and received on the first Business Day following the day on which it is sent, provided that the sender has evidence of a successful transmission, such as a fax confirmation or email receipt confirmation.

# 19. Entire Agreement

The provisions herein contained constitute the entire agreement between the parties relating to the Offering and supersede all previous communications, representations, understandings and agreements between the parties, including the Engagement Letter, with respect to the subject matter hereof whether verbal or written.

## 20. Press Releases

Any press release connected with the Offering issued by the Corporation shall be issued only after consultation with the Agent and in compliance with Applicable Securities Laws and the U.S Securities Act. If the Offering is successfully completed, the Agent shall be permitted to publish, at the Agent's expense, such advertisements or announcements relating to the services provided hereunder in such newspaper or other publications as it may consider appropriate as long as such advertisement or announcement complies with Applicable Securities Laws.

#### 21. Funds

Unless otherwise specified, all funds referred to in this Agreement shall be in Canadian dollars.

## 22. Time of the Essence

Time shall be of the essence of this Agreement.

#### 23. Further Assurances

Each of the parties hereto shall cause to be done all such acts and things or execute or cause to be executed all such documents, agreements and other instruments as may reasonably be necessary or desirable for the purposes of carrying out the provisions and intent of this Agreement.

#### 24. Assignment

Except as contemplated herein, no party hereto may assign this Agreement or any part hereof without the prior written consent of the other party hereto. Subject to the foregoing, this Agreement shall enure to the benefit of, and shall be binding upon, the Corporation and the Agent and their successors and legal representatives, and nothing expressed or mentioned in this Agreement is intended or shall be construed to give any other person any legal or equitable right, remedy or claim under or in respect of this Agreement, or any provisions contained in this Agreement, this Agreement and all conditions and provisions of this Agreement being intended to be and being for the sole and exclusive benefit of such persons and for the benefit of no other person except that the covenants and indemnities of the Corporation set out under the heading "Indemnity and Contribution" shall also be for the benefit of the Indemnified Party.

#### 25. Severability

If any provision of this Agreement is determined to be void or unenforceable in whole or in part, it shall be deemed not to affect or impair the validity of any other provision of this Agreement and such void or unenforceable provision shall be severable from this Agreement.

#### 26. Singular and Plural, etc.

Unless otherwise expressly provided in this Agreement, words importing only the singular number include the plural and vice versa and words importing gender include all genders. References to "Sections", "subsections" or "subparagraphs" are to the appropriate section, subsection or subparagraph of this Agreement. References to any agreement or instrument, including this Agreement, are deemed to be references to the agreement or instrument as varied, amended, modified, supplemented or replaced from time to time, references herein to "including" shall mean "including, without limitation", and any specific references herein to any legislation or enactment are deemed to be references to such legislation or enactment as the same may be amended or replaced from time to time.

## 27. Governing Law

This Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein and the parties hereto irrevocably attorn to the jurisdiction of the courts of such province.

# 28. Language

The parties hereto confirm their express wish that this Agreement and all documents and agreements directly or indirectly relating thereto be drawn up in the English language.

Les parties reconnaissent leur volonté express que la présente convention ainsi que tous les documents et contrats s'y rattachant directement ou indirectement soient rédigés en anglais.

# 29. Counterparts

This Agreement may be executed by any one or more of the parties to this Agreement in any number of counterparts, each of which shall be deemed to be an original, but all such counterparts shall together constitute one and the same agreement.

# 30. Facsimile and Electronic Transmission

The Corporation and the Agent shall be entitled to rely on delivery by facsimile or other electronic means of an executed copy of this Agreement and acceptance by the Corporation and the Agent of that delivery shall be legally effective to create a valid and binding agreement between the Corporation and the Agent in accordance with the terms of this Agreement.

# [REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

If the foregoing is in accordance with your understanding and is agreed to by you, pl the same to the Agent upon which this letter as so accepted shall constitute an agreem		
	Yours very truly,	
	BLOC	OM BURTON SECURITIES INC.
	Ву:	(signed) "Michael Pollard" Authorized Officer
The foregoing offer is accepted and agreed to as of the date first above written.		
	TITAN	MEDICAL INC.

By:

(signed) "Stephen Randall" Authorized Officer

# SCHEDULE "A"

# CONVERTIBLE SECURITIES

# STOCK OPTIONS GRANTED AND OUTSTANDING MARCH 15, 2019

	Exercise	Number	Weighted-average remaining	Options
	Price (CDN)	Outstanding	contractual life (years)	Exercisable
note	2.09	50,349	2.81	50,349.00
	3.28	31,498	6.50	31,498.00
	4.50	18,935	4.30	18,935.00
	4.80	3,040	1.55	3,040.00
note	4.93	40,000	2.96	40,000.00
	7.49	5,590	6.36	5,590.00
	9.00	11,481	6.36	11,481.00
	9.60	1,105	1.61	1,105.00
	11.70	6,667	1.77	6,667.00
	12.00	1,948	1.77	1,948.00
	12.90	50,000	5.14	12,500.00
	14.40	18,950	5.70	4,737.00
	15.00	16,667	4.95	8,333.00
	15.00	273,948	5.90	68,487.00
	17.10	277,519	4.89	138,759.53
	30.00	105,719	2.49	81,462.00
	30.60	6,120	1.82	6,120.00
	32.40	18,810	1.92	18,810.00
	41.70	658	0.80	658.00
	45.30	560	1.45	560.00
	51.60	15,371	1.28	15,371.00
	58.20	10,847	0.22	10,847.00
	_	·	_	

965,782

537,258

Options were granted in U.S. dollars but have been converted to CDN  $\$  for presentation Exchange rate used is USD 1.00= CDN 1.3266

NOTE

# WARRANTS

Below is a table that sets out the various series of warrants of the Corporation adjusted in accordance with the Corporation's consolidation of its Common Shares on the basis of one post-consolidation Common Share for 30 pre-consolidation Common Shares effective June 19, 2018. There is no assurance that any warrants will be exercised prior to their expiry.

# AS AT MARCH 15, 2019

	Issue Date	Expiry Date	Issued Warrants Exercisable for # Common Shares	Outstanding Warrants Exercisable for # Common Shares	Exercise Price per Common Share
TMD.W.T.F	November 16, 2015	November 16, 2020	233,740	233,740	48.00
TMD.W.T.G	February 12, 2016	February 12, 2021	389,027	386,694	30.00
TMD.W.T.G	February 23, 2016	February 12, 2021	58,226	58,226	30.00
TMD.W.T.H	March 31, 2016	March 31, 2021	501,831	501,831	36.00
TMD.W.T.H	April 14, 2016	March 31, 2021	75,275	75,275	36.00
TMD.W.T.I	September 20, 2016	September 20, 2021	569,444	569,444	22.50
TMD.W.T.I	October 27, 2016	September 20, 2021	67,667	67,667	22.50
Not Listed	March 16, 2017	March 16, 2019	357,787	135,824	12.00
Not Listed	March 16, 2017	March 16, 2021	357,787	355,253	15.00
Not Listed	June 29, 2017	June 29, 2022	1,612,955	75,810	6.00
Not Listed	July 21, 2017	June 29, 2022	370,567	370,567	6.00
Not Listed	August 24, 2017	August 24, 2022	563,067	563,067	6.00
Not Listed	December 5, 2017	December 5, 2022	1,533,333	1,533,333	18.00
Not Listed	April 10, 2018	April 10, 2023	1,126,665	1,126,665	10.50
Not Listed	May 10, 2018	April 10, 2023	168,889	168,889	10.50
Not Listed*	August 10, 2018	August 10, 2023	7,679,574	6,661,068	4.15
			15,665,834	12,883,353	

<sup>\*</sup> The exercise price of the August 10, 2018 warrants is USD \$3.20. For conformity, because the other warrants in this table are in CDN dollars, the exercise price and potential proceeds of the August 10, 2018 warrants have been converted to CDN dollars using the Bank of Canada rate on August 3, 2018 of USD \$1.00 = CDN \$1.2983.

# BROKER WARRANTS

Issue Date	Number Broker Warrants Exercisable for # Common Shares	Exercise Price per Common Share
March 16, 2017	50,005	CAD \$10.50
June 29, 2017	3,463	CAD \$4.50
December 5, 2017	105,350	CAD \$15.00
April 10, 2018	78,867	CAD \$9.00
May 10, 2018	10,928	CAD \$9.00
August 10, 2018	537,570	USD \$2.50
TOTAL	786,183	

# SCHEDULE "B"

# CORPORATION IP

# **Patents**

Region	Application Number	Publication Number	IP Right Number
AU	2015362021	2015362021	II Kigiit Nullioci
AU	2017210349	2017210349	
CA	2984092	2984092	
	2986770	2986770	
CA			
CA	3004277	3004277	
CA	3010863	3010863	
CA	3010896	3010896	
CA	3027080	-	
CA	3034919	-	
CN	201580064733.4	107107343	
CN	201580079340.0	107530875	
CN	201680041417.X	107847284	
CN	201680078615.3	108464000	
CN	201780005500.6	108463184	
CN	201910026625.8	-	
EP	11876682.3	2785267	
EP	15866790.7	3206842	
EP	15891039.8	3288720	
EP	16734867.1	3242773	
EP	16734868.9	3242774	
EP	16810648.2	3310290	
EP	16838146.5	3341791	
EP	17171068.4	3238650	
EP	17740924.0	3380033	
EP	18213627.5	-	
IN	11772/DELNP/2015	21/2016	
IN	201717021787	52/2017	
JP	2018-000231	2018075432	
JP	2018-529653	-	
JP	2018-530517	_	
JP	2019-18850	_	
KR	2017-7017983	20170091690	
KR	2018-7019407	20180093021	
KR	2018-7023785	20180104047	
US	14/262,221	20140230595	
US	14/279,828	20140249546	
US	14/899,768	20160143633	
US	15/485,720	20180297211	
US	15/494,740	20170225337	
US	15/542,356	20170223337 20180271607	
US	15/552,993	201802/160/20180049770	
US	15/566,525	20180098780	

LIC	15/570 296	20190122056	
US	15/570,286	20180132956	
US	15/593,000	20180325579 20180054605	
US	15/677,307		
US	15/686,571	20190060029	
US	15/690,035	20190059935	
US	15/737,245	20180168758	
US	15/744,014	20180193086	
US	15/754,566	20180249901	
US	15/780,207	20180353254	
US	15/780,593	20180353245	
US	15/846,986	-	
US	15/893,195	20180228562	
US	16/053,232	-	
US	16/060,905	-	
US	16/084,368	-	
US	16/085,152	-	
US	16/093,918	-	
US	16/110,883	-	
US	16/156,625	-	
US	16/156,651	-	
US	16/160,200	20190046280	
US	16/174,602	-	
US	16/174,620	-	
US	16/174,646	_	
US	16/174,649	_	
US	16/176,221	_	
US	16/185,788	_	
US	16/186,234	_	
US	16/235,071	_	
US	16/235,246		
US	16/235,288		
US	16/273,442		
US	16/299,834		
US	29/668,353	-	
		2010040278	
WO	PCT/US18/45646	2019040278	2913943
CA	2913943	2913943	
CA	2968609	2968609	2968609
CA	2973227	2973227	2973227
CA	2973235	2973235	2973235
CA	2982615	2982615	2982615
CA	2996014	2996014	2996014
CN	201380078618	105431106	105431106
EP	11874984.5	2773277	2773277
EP	13887243.7	2996613	2996613
JP	2016-520200	2016528946	6274630
JP	2017-531374	2018504285	6433595
US	09/474,924	-	6,358,196
US	12/227,582	20100030377	8,224,485
US	12/449,779	20100036393	8,792,688
US	12/459,292	-	8,347,754
US	12/583,351	-	8,332,072
	_	2	
	В	-2	

US	12/655,675	-	8,306,656
US	13/106,306	-	9,033,998
US	13/494,852	20120253513	8,768,509
US	13/660,328	20130197538	9,763,739
US	13/660,615	20130197697	8,930,027
US	14/261,614	20140276956	9,724,162
US	14/302,723	20140316435	9,149,339
US	14/831,045	20160030122	9,421,068
US	15/211,295	20160346051	9,681,922
US	15/294,477	20170027656	9,629,688
US	15/442,070	20170156807	9,925,014
US	15/490,098	20170333140	10,130,434
US	15/542,398	20170367777	10,159,536
US	15/961,507	-	10,058,396

# **Trademarks**

Region	<u>Serial Number</u>
US	87222823
US	87222834
CA	1807214
CA	1807220

Region	<b>Application Number</b>	Registration Number
CN	27681249	-
CN	27681250	
CN	27681251	
CN	27681252	
CN	27681253	
CN	27681254	
CN	13580910	13580910
CN	13580908	13580908
CN	13580907	13580907
CN	13580905	13580905

# SCHEDULE "C"

# LICENSOR CONTRACTS

# **Corporation as Licensor**

- Synergist Medical Inc., a predecessor to the Corporation, entered into a patent agreement with Reiza Rayman on May 12, 2008 pursuant to which Synergist Medical Inc. granted to Rayman certain exclusive rights in and to U.S. Patent No. 6,358,196.
- Synergist Medical Inc., a predecessor to the Corporation, entered into a patent agreement with John D. Unsworth on May 1, 2008 pursuant to which Synergist Medical Inc. granted to Unsworth certain exclusive rights in and to U.S. Patent Nos. 8,224,485, 8,768,509, 8,792,688, 9,421,068, 9,681,922 and 10,130,434, and U.S. Patent Application No. 16/160,200.

# WARRANT INDENTURE

Providing for the Issue of Common Share Purchase Warrants

BETWEEN

# TITAN MEDICAL INC.

- and -

# COMPUTERSHARE TRUST COMPANY OF CANADA

Dated as of March [●], 2019

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THIS WARRANT INDENTURE dated as of the [●] day of March, 2019.

#### BETWEEN:

TITAN MEDICAL INC., a corporation existing under the laws of the Province of Ontario

(hereinafter called the "Company")

- and -

COMPUTERSHARE TRUST COMPANY OF CANADA, a trust company licensed to carry on business in all Provinces in Canada

(hereinafter called the "Warrant Agent")

WHEREAS the Company proposes to issue and sell up to 8,455,882 Warrants (as hereinafter defined) pursuant to the Prospectus (as hereinafter defined) and this Indenture;

AND WHEREAS pursuant to this Indenture, each Warrant shall entitle the registered holder thereof to purchase one Common Share (as hereinafter defined) (subject to adjustment as herein provided) at the price and upon the terms and conditions herein set forth;

AND WHEREAS for such purpose the Company deems it necessary to create and issue Warrants constituted and issued in the manner hereinafter appearing and the Warrants shall be represented solely by Warrant Certificates (as hereinafter defined) issued under this Indenture;

AND WHEREAS all things necessary have been done and performed to make the Warrants and the Warrant Certificates (when certified by the Warrant Agent and issued as provided for in this Indenture) legal, valid and binding upon the Company with the benefits of and subject to the terms of this Indenture;

AND WHEREAS, as of the date hereof the Corporation has an effective Registration Statement (as defined below) under the Securities Act (as defined below);

AND WHEREAS the representations and statements of fact contained in the above recitals are those of the Company and not of the Warrant Agent;

NOW THEREFORE THIS INDENTURE WITNESSES that for good and valuable consideration mutually given and received, the receipt and sufficiency of which is hereby acknowledged, it is hereby agreed and declared as follows:

#### ARTICLE I INTERPRETATION

# 1.1 Definitions

In this Indenture, unless there is something in the subject matter or context inconsistent therewith, the terms defined in this Section or elsewhere herein shall have the respective meanings specified in this Section or elsewhere herein:

- (a) "Affiliate" has the meaning ascribed thereto in the Securities Act (Ontario), as amended or replaced from time to time;
- (b) "Agent" means Bloom Burton Securities Inc.;
- (c) "Applicable Securities Laws" means the applicable securities laws and regulations of each of the provinces and territories of Canada, and the applicable federal and state securities laws and regulations of the United States, together with all related rules, policies, notices and orders of applicable regulatory authorities;
- (d) "Authenticated" means (a) with respect to the issuance of a Warrant Certificate, one which has been duly signed by the Corporation and authenticated by manual signature of an authorized officer of the Warrant Agent, (b) with respect to the issuance of an Uncertificated Warrant, one in respect of which the Warrant Agent has completed all Internal Procedures such that the particulars of such Uncertificated Warrant as required by Section 2.9 are entered in the register of Warrantholders, "Authenticate", "Authenticating" and "Authentication" have the appropriate correlative meanings;
- (e) "Business Day" means a day which is not Saturday or Sunday or a statutory holiday in the City of Toronto or a day on which the principal office of the Warrant Agent in the City of Toronto is closed;
- (f) "Beneficial Owner" means a person that has a beneficial interest in the Warrant that is represented by a Warrant Certificate or Uncertificated Warrant registered in the name of CDS or its nominee, the purposes of being held by or on behalf of CDS as custodians for CDS Participants;
- (g) "CDS" or the "Depository" means CDS Clearing and Depository Services Inc. or its nominee;
- (h) "CDS Participant" means a broker, dealer, bank or other financial institution or other person for whom, from time to time, CDS effects book entries for the Warrants deposited with CDS;
- (i) "Closing Date" has the meaning ascribed to such term in the Prospectus;
- (j) "Common Shares" or "Common Stock" means the common shares in the capital of the Company as such shares exist at the close of business on the date hereof and, in the event that there shall occur a change in respect of or affecting the Common Shares referred to in Section 5.1 (whether or not such change shall result in an adjustment in the Exercise Price), the term "Common Shares" or "Common Stock" shall mean the shares, other securities or other property which a Warrantholder is entitled to purchase upon the exercise of Warrants resulting from such change;
- (k) "Company" means Titan Medical Inc., a corporation existing under the laws of the Province of Ontario, and its lawful successors from time to time;

- (l) "Company's Auditors" means the chartered accountant or firm of chartered accountants duly appointed as auditor or auditors of the Company from time to time;
- (m) "Confirmation" means a confirmation sent by CDS to the Warrant Agent in connection with the exercise of a Warrant by a Beneficial Owner through a CDS Participant;
- (n) "Counsel" means a barrister or solicitor (who may be an employee of the Company) or a firm of barristers and solicitors (who may be counsel to the Company), in both cases acceptable to the Warrant Agent, acting reasonably;
- (o) "Court" has the meaning attributed thereto in subsection 11.7(1);
- (p) "Current Market Price" at any date, means the volume weighted average price per share at which the Common Shares have traded:
  - (i) on the TSX;
  - (ii) if the Common Shares are not listed on the TSX, on any stock exchange upon which the Common Shares are listed as may be selected for this purpose by the directors, acting reasonably and in good faith; or
  - (iii) if the Common Shares are not listed on any stock exchange, on any over-the- counter market;

during the 20 consecutive trading days (on each of which at least 500 Common Shares are traded in board lots) ending the second trading day before such date and the weighted average price shall be determined by dividing the aggregate sale price of all Common Shares sold in board lots on the exchange or market, as the case may be, during such 20 consecutive trading days by the number of Common Shares sold, or if not traded on any recognized market or exchange, as determined by the directors of the Company acting reasonably;

- (q) "Date of Issue" for a particular Warrant means the date on which the Warrant is actually issued by or on behalf of the Company;
- (r) "Director" means a director of the Company for the time being, and, unless otherwise specified herein, reference to "action by the Directors" means action by the Directors of the Company as a board, or whenever duly empowered, action by any committee of such board;
- (s) "Exchange Act" means the United States Securities Exchange Act of 1934, as amended;
- (t) "Exercise Date" with respect to any Warrant means the date on which the Warrant Certificate representing such Warrant is surrendered for exercise in accordance with the provisions of Article IV;
- (u) "Exercise Period" means the period commencing on the time of issue on the Date of Issue and ending at the Time of Expiry;

- (v) "Exercise Price" means a price per Common Share of US\$ 4.00 unless such price shall have been adjusted in accordance with the provisions of Section 5.1, in which case it shall mean such adjusted price in effect at such time;
- (w) "Extraordinary Resolution" has the meaning attributed thereto in Section 9.11;
- (x) "Internal Procedures" means in respect of the making of any one or more entries to, changes in or deletions of any one or more entries in the register at any time (including without limitation, original issuance or registration of transfer of ownership) the minimum number of the Warrant Agent's internal procedures customary at such time for the entry, change or deletion made to be complete under the operating procedures followed at the time by the Warrant Agent, it being understood that neither preparation and issuance shall constitute part of such procedures for any purpose of this definition;
- (y) "NASDAQ" means the NASDAQ Capital Market;
- (z) "Person" means an individual, a corporation, a partnership, a syndicate, a trustee or any unincorporated organization and words importing persons are intended to have a similarly extended meaning;
- (aa) "Prospectus" means the final short form prospectus dated March ●, 2019;
- (bb) "Registration Statement" means the Form F-10 registration statement filed with the SEC under the Securities Act registering the Common Shares issuable upon exercise of the Warrants;
- (cc) "SEC" or "Commission" means the United States Securities and Exchange Commission;
- (dd) "Securities" means the Common Shares and Warrants;
- (ee) "Securities Act" means the United States Securities Act of 1933, as amended;
- (ff) "Shareholder" means a holder of record of one or more Common Shares;
- (gg) "Subsidiary of the Company" means a corporation of which voting securities carrying a majority of the votes attached to all voting securities are held, directly or indirectly other than by way of security only, by or for the benefit of the Company, the Company and one or more subsidiaries thereof, or one or more subsidiaries of the Company; and, as used in this definition, voting securities means securities of a class or series or classes or series carrying a voting right to elect directors under all circumstances provided that, for the purposes hereof, securities which only carry the right to vote conditionally on the happening of an event shall not be considered voting securities whether or not such event shall have happened nor shall any securities be deemed to cease to be voting securities solely by reason of a right to vote accruing to securities of another class or series or classes or series by reason of the happening of such event;
- (hh) "this Warrant Indenture", "this Indenture", "herein", "hereby", and similar expressions mean and refer to this Indenture and any indenture, deed or instrument supplemental or ancillary hereto; and the expressions "Article", "Section", and "subsection" followed by a number mean and refer to the specified Article, Section or subsection of this Indenture;

- (ii) "Time of Expiry" means 5:00 p.m. (Toronto time) on ●, 2024 (being the date that is 60 months after the date of this Indenture);
- (jj) "Trading Day" means a day on which either the TSX or NASDAQ are open for trading;
- (kk) "Transfer Agent" means, with respect to the Common Shares in Canada, Computershare Investor Services Inc. or, with respect to the Common Shares in the United States, Computershare Trust Company, N.A.;
- (ll) "TSX" means the Toronto Stock Exchange;
- (mm) "Uncertificated Warrant" means any Warrant which is not issued as part of a Warrant Certificate;
- (nn) "Unit" has the meaning ascribed to such term in the Prospectus;
- (00) "United States" means the United States of America as that term is defined in Regulation S;
- (pp) "U.S. Person" means a "U.S. person" as that term is defined in Regulation S;
- (qq) "U.S. Purchaser" means an original purchaser of Units of which the Warrants comprise a part who was, at the time of purchase, either an Institutional Accredited Investor or a Qualified Institutional Buyer and (a) a U.S. Person, (b) any person purchasing such Units on behalf of, or for the account or benefit of, any U.S. Person or any person in the United States, (c) any person who receives or received an offer to acquire such Units while in the United States, and (d) any person who was in the United States at the time such person's buy order was made or the subscription agreement pursuant to which such Units were acquired was executed or delivered;
- (rr) "Warrant" means each common share purchase warrant of the Company issued or to be issued hereunder entitling the holder thereof to purchase one Common Share for each Warrant upon payment of the Exercise Price; provided that in each case the number and/or class of shares or securities receivable on the exercise of the Warrant may be subject to increase or decrease or change in accordance with the terms and provisions hereof:
- (ss) "Warrant Agent" means Computershare Trust Company of Canada, or its successors hereunder;
- (tt) "Warrant Certificate" means a certificate representing one or more Warrants substantially in the form set forth in Schedule "A" hereto or such other form as may be approved by the Company, the Agent and the Warrant Agent. To the extent that the Warrants are in the non-certificated issuer system, then this term shall mean the appropriate evidence of such warrants pursuant to the non-certificated issuer system;

- (uu) "Warrantholders" or "holders" without reference to Common Shares means the Persons whose names are entered for the time being on the register maintained pursuant to Section 3.2(1);
- (vv) "Warrantholders' Request" means an instrument signed in one or more counterparts by Warrantholders entitled to purchase, in the aggregate, not less than 10% of the aggregate number of Warrants then unexercised and outstanding, which requests the Warrant Agent to take some action or proceeding specified therein; and
- (ww) "written order of the Company", "written request of the Company", "written consent of the Company" and "certificate of the Company" and any other document required to be signed by the Company, means, respectively, a written order, request, consent, certificate or other document signed in the name of the Company by any officer or director and may consist of one or more instruments so executed.

# 1.2 Number and Gender

Unless the context otherwise requires, words importing the singular include the plural and vice versa and words importing gender include all genders.

#### 1.3 Interpretation Not Affected by Headings, Etc.

The division of this Indenture into Articles, Sections and subsections, the provision of a table of contents and the insertion of headings are for convenience of reference only and shall not affect the construction or interpretation of this Indenture or the Warrant Certificates.

#### 1.4 Day Not a Business Day

In the event that any day on or before which any action is required to be taken hereunder is not a Business Day, then such action shall be required to be taken on or before the requisite time on the next succeeding day that is a Business Day.

# 1.5 Governing Law

This Indenture and the Warrant Certificates shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein and shall be treated in all respects as Ontario contracts.

#### 1.6 Currency

Except as otherwise specified herein, all dollar amounts herein are expressed in lawful money of the United States.

#### 1.7 Meaning of "Outstanding"

Every Warrant represented by a Warrant Certificate countersigned and delivered by the Warrant Agent hereunder shall be deemed to be outstanding until it shall be cancelled or exercised pursuant to Article IV, provided that where a new Warrant Certificate has been issued pursuant to Section 2.3 hereof to replace one which has been mutilated, lost, destroyed or stolen, the Warrants represented by only one of such Warrant Certificates shall be counted for the purpose of determining the aggregate number of Warrants outstanding.

# 1.8 Severability

In the event that any provision hereof shall be determined to be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remainder of such provision and any other provision hereof shall not be affected or impaired thereby.

#### 1.9 Statutory References

In this Indenture, unless something in the subject matter or context is inconsistent therewith or unless otherwise herein provided, a reference to any statute is to that statute as now enacted or as the same may from time to time be amended, re-enacted or replaced and includes any regulation made thereunder.

#### ARTICLE II ISSUE OF WARRANTS

# 2.1 Issue of Warrants

Up to 8,455,882 Warrants are hereby created and authorized to be issued and certificates evidencing such Warrants as have been issued shall be executed by the Company, certified by or on behalf of the Warrant Agent upon the written order of the Company and delivered in accordance with this Article.

# 2.2 Form and Terms of Warrants

- (1) Subject to subsection 2.2(2), each Warrant authorized to be issued hereunder shall entitle the holder thereof to purchase upon due exercise and upon due execution and endorsement of the Notice of Exercise on the Warrant Certificate or other instrument of subscription in such form as the Warrant Agent and/or the Company may from time to time prescribe and upon payment of the Exercise Price in effect on the Exercise Date, one Common Share at any time during the Exercise Period, in accordance with the provisions of this Indenture.
- (2) The number of Common Shares which may be purchased pursuant to the Warrants and the Exercise Price shall be adjusted in the events and in the manner specified in Section 5.1.
- (3) The Warrants may be issued in both certificated and uncertificated form, except that all Warrants originally issued to a U.S. Purchaser will be issued in certificated form only. Warrant Certificates for the Warrants shall be substantially in the form attached as Schedule "A" hereto, with such additions, variations and changes as may be required or permitted by the terms of this Indenture, and which may from time to time be agreed upon by the Warrant Agent and the Company, and shall bear such legends and such distinguishing letters and numbers as the Company may, with the approval of the Warrant Agent, prescribe. The Warrant Certificates shall be dated as of the date hereof or on such other Closing Date upon which Warrants shall be issued.

- (4) Subject to subsection 2.2(5), Warrant Certificates shall be issuable in any denomination.
- (5) If a Warrantholder is entitled to a fraction of a Warrant the number of Warrants issued to that Warrantholder shall be rounded down to the nearest whole Warrant
- (6) The Warrant Certificates may be engraved, lithographed or printed (the expression "printed" including for purposes hereof both original typewritten material as well as mimeographed, mechanically, photographically, photostatically or electronically reproduced, typewritten or other written material), or partly in one form and partly in another, as the Company, with the approval of the Warrant Agent, may determine. No change in the form of the Warrant Certificate shall be required by reason of any adjustment made pursuant to Section 5.1 in the number and/or class of securities or type of securities that may be acquired pursuant to the Warrants.

# 2.3 Issue in Substitution for Lost Warrant Certificates

- (1) In the event that any Warrant Certificates issued and certified under this Indenture shall be mutilated, lost, destroyed or stolen, the Company, subject to applicable law, shall issue and thereupon the Warrant Agent shall certify and deliver, a new certificate of like tenor, and bearing the same legends, as the one mutilated, lost, destroyed or stolen in exchange for and in place of and upon cancellation of such mutilated certificate, or in lieu of and in substitution for such lost, destroyed or stolen certificate, and the substituted certificate shall be in a form approved by the Warrant Agent and shall be entitled to the benefits hereof and shall rank equally in accordance with its terms with all other Warrant Certificates issued or to be issued hereunder.
- (2) The applicant for the issue of a new certificate pursuant to this Section 2.3 shall bear the reasonable cost of the issue thereof and in case of loss, destruction or theft shall, as a condition precedent to the issue thereof, furnish to the Company and to the Warrant Agent such evidence of ownership and of the loss, destruction or theft of the certificate so lost, destroyed or stolen as shall be satisfactory to the Company and to the Warrant Agent in their sole discretion, acting reasonably, and such applicant shall also be required to furnish an indemnity and surety bond in amount and form satisfactory to the Company and the Warrant Agent, each acting reasonably, to save each of them harmless, and shall pay the reasonable expenses, charges and any taxes applicable thereto to the Company and the Warrant Agent in connection therewith.

# 2.4 Non-Certificated Deposit

- (1) Subject to the provisions hereof, at the Company's option, Warrants, other than those issued pursuant to a U.S. Purchaser (which will be evidenced in certificated form only), will be issued and registered in the name of CDS or its nominee and:
  - (A) may be directly deposited by the Warrant Agent to CDS; and
  - (B) shall be identified by the CUSIP/ISIN 88830X330 /CA88830X3307
- (2) If the Company issues Warrants in a non-certificated format, Beneficial Owners of such Warrants registered and deposited with CDS shall not receive Warrant Certificates in definitive form and shall not be considered owners or holders thereof under this Indenture or any supplemental agreement. Beneficial interests in Warrants registered and deposited with CDS will be represented only through the non-certificated inventory system administered by CDS. Transfers of Warrants registered and deposited with CDS between CDS Participants shall occur in accordance with the rules and procedures of CDS. Neither the Company nor the Warrant Agent shall have any responsibility or liability for any aspects of the records relating to or payments made by CDS or its nominee, on account of the beneficial interests in Warrants registered and deposited with CDS. Nothing herein shall prevent the Beneficial Owners of Warrants registered and deposited with CDS from voting such Warrants using duly executed proxies.
- (3) All references herein to actions by, notices given or payments made to Warrantholders shall, where Warrants are held through CDS, refer to actions taken by, or notices given or payments made to, CDS upon instruction from the CDS Participants in accordance with its rules and procedures. For the purposes of any provision hereof requiring or permitting actions with the consent of or at the direction of Warrantholders evidencing a specified percentage of the aggregate Warrants outstanding, such direction or consent may be given by Beneficial Owners acting through CDS and the CDS Participants owning Warrants evidencing the requisite percentage of the Warrants. The rights of a Beneficial Owner whose Warrants are held through CDS shall be exercised only through CDS and the CDS Participants and shall be limited to those established by law and agreements between such Beneficial Owners and CDS and the CDS Participants upon instructions from the CDS Participants. Each of the Warrant Agent and the Company may deal with CDS for all purposes (including the making of payments) as the authorized representative of the respective Warrants and such dealing with CDS shall constitute satisfaction or performance, as applicable, of their respective obligations hereunder.
- (4) For so long as Warrants are held through CDS, if any notice or other communication is required to be given to Warrantholders, the Warrant Agent will give such notices and communications to CDS.

- (5) If CDS resigns or is removed from its responsibility as Depository and the Warrant Agent is unable or does not wish to locate a qualified successor, CDS shall provide the Warrant Agent with instructions for registration of Warrants in the names and in the amounts specified by CDS and the Company shall issue and the Warrant Agent shall certify and deliver the aggregate number of Warrants then outstanding in the form of definitive Warrant Certificates representing such Warrants.
- (6) Every Warrant Authenticated upon registration of transfer of an Uncertificated Warrant, or in exchange for or in lieu of an Uncertificated Warrant or any portion thereof, whether pursuant to this Section 2.4 or otherwise, shall be Authenticated in the form of, and shall be, an Uncertificated Warrant, unless such Warrant is registered in the name of a person other than the Depository for such Uncertificated Warrant or a nominee thereof.
- (7) The rights of Beneficial Owners who hold securities entitlements in respect of the Warrants through the non-certificated inventory system administered by CDS shall be limited to those established by applicable law and agreements between the Depository and the CDS Participants and between such CDS Participants and the Beneficial Owners who hold securities entitlements in respect of the Warrants through the non-certificated inventory system administered by CDS, and such rights must be exercised through a CDS Participant in accordance with the rules and procedures of the Depository.
- (8) Notwithstanding anything herein to the contrary, neither the Company nor the Warrant Agent nor any agent thereof shall have any responsibility or liability for:
  - (A) the electronic records maintained by the Depository relating to any ownership interests or any other interests in the Warrants or the depository system maintained by the Depository, or payments made on account of any ownership interest or any other interest of any person in any Warrants represented by an electronic position in the non-certificated inventory system administered by CDS (other than the Depository or its nominee);
  - (B) for maintaining, supervising or reviewing any records of the Depository or any CDS Participant relating to any such interest; or
  - (C) any advice or representation made or given by the Depository or those contained herein that relate to the rules and regulations of the Depository or any action to be taken by the Depository on its own direction or at the direction of any CDS Participant.
- (9) The Company may terminate the application of this Section 2.4 in its sole discretion in which case all Warrants shall be evidenced by Warrant Certificates registered in the name of a person other than the Depository.
- (10) Notwithstanding the foregoing, upon request of the Beneficial Owner, through the Depository, the Warrant Agent shall issue a Warrant Certificate in respect of the interest of such Beneficial Owner, in which case the Uncertificated Warrant representing such Warrants shall be reduced accordingly and such Warrants shall be duly registered as directed by the Depository.

# 2.5 Warrantholder not a Shareholder

Nothing in this Indenture or in the holding of a Warrant evidenced by a Warrant Certificate or otherwise, shall be construed as conferring upon a Warrantholder any right or interest whatsoever as a Shareholder of the Company, including, but not limited to, the right to vote at, to receive notice of, or to attend, meetings of shareholders or any other proceedings of the Company, nor entitle the holder to any right or interest in respect thereof except as herein and in the Warrants expressly provided.

#### 2.6 Warrants to Rank Pari Passu

All Warrants shall rank pari passu, whatever may be the respective Dates of Issue of the same.

# 2.7 Signing of Warrant Certificates

The Warrant Certificates shall be signed by any one of the directors or officers of the Company and may, but need not, be under the corporate seal of the Company or a reproduction thereof. The signature of any such director or officer may be mechanically reproduced and Warrant Certificates bearing such mechanically reproduced signatures shall be binding upon the Company as if they had been manually signed by such director or officer. Notwithstanding that the person whose manual or mechanically reproduced signature appears on any Warrant Certificate as a director or officer may no longer holds office at the date of issue of the Warrant Certificate or at the date of certification or delivery thereof, any Warrant Certificate signed as aforesaid shall, subject to Section 2.7, be valid and binding upon the Company and the registered holder thereof will be entitled to the benefits of this Indenture.

# 2.8 Certification by the Warrant Agent

- (1) No Warrant Certificate shall be issued or, if issued, shall be valid for any purpose or entitle the registered holder to the benefit hereof or thereof until it has been certified by manual signature by or on behalf of the Warrant Agent, and such certification by the Warrant Agent upon any Warrant Certificate shall be conclusive evidence as against the Company that the Warrant Certificate so certified has been duly issued hereunder and that the holder is entitled to the benefit hereof.
- (2) The certification of the Warrant Agent on Warrant Certificates issued hereunder shall not be construed as a representation or warrant by the Warrant Agent as to the validity of this Indenture or the Warrant Certificates (except the due certification thereof) and the Warrant Agent shall in no respect be liable or answerable for the use made of the Warrant Certificates or any of them or of the consideration therefor nor for any breach by the Company of its covenants herein, except as otherwise specified therein.

# 2.9 RESERVED.

# 2.10 Copy of Indenture

The Company shall, on the written request of the Warrantholder and without charge, provide the Warrantholder with a copy of this Indenture. A copy of this Indenture will also be available on the Company's profile on www.sedar.com.

# ARTICLE III EXCHANGE AND OWNERSHIP OF WARRANTS; NOTICES

#### 3.1 Exchange of Warrant Certificates

- (1) Warrant Certificates entitling Warrantholders to purchase any specified number of Common Shares may, upon compliance with the reasonable requirements of the Warrant Agent, be exchanged for one or more Warrant Certificates in any other authorized denomination bearing the same legends representing in the aggregate an equal number of Warrants as the number of Warrants represented by the Warrant Certificates being exchanged. The Company shall sign all Warrant Certificates necessary to carry out exchanges as aforesaid and such Warrant Certificates shall be certified by or on behalf of the Warrant Agent.
- (2) Warrant Certificates may be exchanged only at the principal transfer office of the Warrant Agent in the City of Toronto, Ontario or at any other place that is designated by the Company with the approval of the Warrant Agent. Any Warrant Certificates tendered for exchange shall be surrendered to the Warrant Agent or its agents and cancelled.
- (3) Except as otherwise herein provided, any Warrant Agent may charge the holder requesting an exchange a reasonable sum for each new Warrant Certificate issued in exchange for Warrant Certificate(s); and payment of such charges and reimbursement of the Warrant Agent or the Company for any and all stamp taxes or governmental or other charges required to be paid shall be made by such holder as a condition precedent to such exchange.

# 3.2 Registration of Warrants

- (1) The Company shall, at all times while any Warrants are outstanding, cause the Warrant Agent and its agents to maintain a register in which will be entered in alphabetical order the names, latest known addresses of the Warrantholders and particulars of the Warrants held by them, and a register of transfers in which shall be entered the particulars of all transfers of Warrants, such registers to be kept by and at the principal transfer office of the Warrant Agent in the City of Toronto.
- (2) At the office of the Warrant Agent during normal business hours, the holder of a Warrant may have such Warrant transferred in accordance with such reasonable requirements as the Warrant Agent may prescribe. The costs of any such transfer registration shall be borne by the transferee or presenter.

- (3) The registers referred to in this Section 3.2 shall at all reasonable times be open for inspection by the Company and by any Warrantholder. The Warrant Agent, when requested in writing so to do by the Company, shall furnish the Company with a list of names and addresses of the Warrantholders showing the number of Warrants held by each Warrantholder.
- Once an Uncertificated Warrant has been Authenticated, the information set forth in the register with respect thereto at the time of Authentication may be altered, modified, amended, supplemented or otherwise changed only to reflect exercise or proper instructions to the Warrant Agent from the Warrantholder as provided herein, except that the Warrant Agent may act unilaterally to make purely administrative changes internal to the Warrant Agent and changes to correct errors. Each person who becomes a Warrantholder of an Uncertificated Warrant, by his, her or its acquisition thereof shall be deemed to have irrevocably (i) consented to the foregoing authority of the Warrant Agent to make such minor error corrections and (ii) agreed to pay to the Warrant Agent, promptly upon written demand, the full amount of all loss and expense (including without limitation reasonable legal fees of the Company and the Warrant Agent plus interest, at an appropriate then prevailing rate of interest to the Warrant Agent), sustained by the Company or the Warrant Agent as a proximate result of such error if but only if and only to the extent that such present or former Warrantholder realized any benefit as a result of such error and could reasonably have prevented, forestalled or minimized such loss and expense by prompt reporting of the error or avoidance of accepting benefits thereof whether or not such error is or should have been timely detected and corrected by the Warrant Agent; provided, that no person who is a bona fide purchaser shall have any such obligation to the Company or to the Warrant Agent.

# 3.3 Transfer of Warrants

- (1) No transfer of a Warrant will be valid unless entered on the register of transfers referred to in subsection 3.2(1), upon surrender to the Warrant Agent of the Warrant Certificate evidencing such Warrant, and a duly completed and executed Transfer Form as attached to the Warrant Certificate executed by the registered holder or his executors, administrators or other legal representatives or his or their attorney duly appointed by an instrument in writing in form and execution satisfactory to the Warrant Agent, and, upon compliance with the conditions herein and such reasonable requirements as the Warrant Agent may prescribe, including compliance with all applicable securities legislation, such transfer will be recorded on the register of transfers by the Warrant Agent. Notwithstanding the foregoing, if the Warrants are Uncertificated Warrants, the provisions of Section 3.2(4) shall apply.
- (2) The transferee of any Warrant will, after surrender to the Warrant Agent of the Warrant Certificate evidencing such Warrant as required by subsection 3.3(1) and upon compliance with all other conditions in respect thereof required by this Indenture or by applicable law, be entitled to be entered on the register of holders referred to in subsection 3.2(1) as the owner of such Warrant free from all equities or rights of set-off or counterclaim between the Company and the transferor or any previous holder of such Warrant, except in respect of equities of which the Company is required to take notice by statute or by order of a court of competent jurisdiction.

(3) The Company will be entitled, and may direct the Warrant Agent, to refuse to recognize any transfer, or enter the name of any transferee, of any Warrant on the registers referred to in subsection 3.2(1), if such transfer would, in the written opinion of counsel to the Company, constitute a violation of Applicable Securities Laws. The Warrant Agent is entitled to assume compliance with all applicable securities legislation unless otherwise notified in writing by the Company. The Warrant Agent shall have no obligation to ensure or verify compliance with any applicable laws or regulatory requirements on the issue, exercise or transfer of any Warrants or any Common Shares issuable upon the exercise thereof provided such issue, exercise or transfer is effected in accordance with the terms of this Warrant Indenture.

# 3.4 Ownership of Certificates

- (1) Except in connection with the registration of Uncertificated Warrants, the Company and the Warrant Agent and their respective agents may deem and treat the holder of any Warrant Certificate as the absolute holder and owner of the Warrants evidenced thereby for all purposes, and the Company and the Warrant Agent shall not be affected by any notice or knowledge to the contrary and, without limiting the foregoing, shall not be bound by notice of any trust or be required to see to the execution thereof.
- (2) Subject to the provisions of this Indenture and applicable law, a Warrantholder shall be entitled to the rights evidenced by such Warrant Certificate free from all equities or rights of set-off or counterclaim between the Company and the original or any intermediate holder thereof and all persons may act accordingly and the receipt by any such holder of the Common Shares obtainable pursuant thereto shall be a good discharge to the Company and the Warrant Agent for the same and neither the Company nor the Warrant Agent shall be bound to inquire into the title of any such holder, except where the Company or the Warrant Agent is required to take notice by statute or by order of a court of competent jurisdiction.

# 3.5 Evidence of Ownership

(1) Upon receipt of a certificate of any bank, trust company or other depositary satisfactory to the Warrant Agent stating that the Warrants specified therein have been deposited by a named person with such bank, trust company or other depositary and will remain so deposited until the expiry of the period specified therein, the Company and the Warrant Agent may treat the person so named as the owner, and such certificate as sufficient evidence of the ownership by such person of such Warrants during such period, for the purpose of any requisition, direction, consent, instrument or other document to be made, signed or given by the holder of the Warrants so deposited.

(2) The Company and the Warrant Agent may accept as sufficient evidence of the fact and date of the signing of any requisition, direction, consent, instrument or other document by any person, the signature, as witness, of any officer of any trust company, bank or depositary satisfactory to the Warrant Agent, the certificate of any notary public or other officer authorized to take acknowledgements of deeds to be recorded at the place where such certificate is made, that the person signing acknowledged to him the execution thereof, or a statutory declaration of a witness of such execution.

# 3.6 Notices

Unless herein otherwise expressly provided, any notice to be given hereunder to the Warrantholders shall be deemed to be validly given if such notice is given by personal delivery or first class mail to the attention of the holder at the registered address of the holder recorded in the registers maintained by the Warrant Agent; provided that in the case of notice convening a meeting of the Warrantholders, the Company may require such publication of such notice, in such city or cities, as it may deem necessary for the reasonable protection of the Warrant holders or to comply with any applicable requirement of law or any stock exchange. Any notice so given shall be deemed to have been given on the day of delivery or three (3) Business Days after mailing. In determining under any provision hereof the date when notice of any meeting or other event must be given, the date of giving notice shall be included and the date of the meeting or other event shall be excluded. For greater certainty, all costs in connection with the giving of notices contemplated by this Section 3.6 shall be borne by the Company.

#### ARTICLE IV EXERCISE OF WARRANTS

# 4.1 Method of Exercise of Warrants

- (1) Certificated Warrants shall be exercised as set forth in the Warrant Certificate.
- (2) No Warrant represented by an Uncertificated Warrant may be exercised unless, prior to such exercise, the Warrantholder of such Warrant shall have taken all other action necessary to exercise such Warrant in accordance with this Indenture and the Internal Procedures. Notwithstanding anything to the contrary contained herein and subject to the Internal Procedures in force from time to time, a Beneficial Owner whose Warrants are represented by an Uncertificated Warrant who desires to exercise his or her Warrants must do so by causing a CDS Participant to deliver to CDS, on behalf of the Beneficial Owner, a written notice of the Beneficial Owner's intention to exercise Warrants in a manner acceptable to CDS. Forthwith upon receipt by CDS of such notice, as well as payment in an amount equal to the product obtained by multiplying the Exercise Price by the number of Common Shares subscribed for, CDS shall deliver to the Warrant Agent a Confirmation.

- (3) Payment by a Beneficial Owner representing the Exercise Price must be provided to the appropriate office of the CDS Participant in a manner acceptable to it. A notice in form acceptable to the CDS Participant and payment from such Beneficial Owner should be provided to the CDS Participant sufficiently in advance so as to permit the CDS Participant to deliver notice and payment to CDS and for CDS in turn to deliver notice and payment to the Warrant Agent prior to Expiry Time. CDS will initiate the exercise by way of the Confirmation and forward the Exercise Price electronically to the Warrant Agent and the Warrant Agent will execute the exercise by issuing to CDS through the non-certified inventory system administered by CDS the Common Shares to which the exercising Beneficial Owner is entitled pursuant to the exercise. Any expense associated with the exercise process will be for the account of the Beneficial Owner exercising the Warrants and/or the CDS Participant exercising the Warrants on its behalf.
- (4) Notwithstanding any provisions of this Warrant Indenture, a beneficial owner may exercise his Warrants or take any actions under this Warrant Indenture in accordance with the rules and procedures of CDS.
- (5) Any subscription referred to in this Section 4.1 shall be signed by the Warrantholder, shall specify the person(s) in whose name such Common Shares are to be issued, the address(es) of such person(s) and the number of Common Shares to be issued to each person, if more than one is so specified. If any of the Common Shares subscribed for are to be issued to (a) person(s) other than the Warrantholder, the signatures set out in the subscription referred to in subsection 4.1(1) shall be guaranteed by a major Canadian chartered bank, or by a medallion signature guaranteed from a member of a recognized Signature Medallion Guarantee Program and the Warrantholder shall pay to the Company all applicable transfer or similar taxes and the Company shall not be required to issue or deliver certificates evidencing Common Shares unless or until such Warrantholder shall have paid to the Company the amount of such tax or shall have established to the satisfaction of the Company that such tax has been paid or that no tax is due.
- (6) If, at the time of exercise of the Warrants, in accordance with the provisions of subsection 3.1(1), there are any trading restrictions on the Common Shares pursuant to applicable securities legislation or stock exchange requirements, the Company shall, on the advice of counsel, endorse any certificates representing the Common Shares to such effect. The Warrant Agent is entitled to assume compliance with all applicable securities legislation unless otherwise notified in writing by the Company.

# 4.2 Effect of Exercise of Warrants

(1) Upon compliance by the Warrantholder with the applicable provisions of Section 4.1, the Common Shares so subscribed for shall be deemed to have been issued and the Person or Persons to whom such Common Shares are to be issued shall be deemed to have become the holder or holders of record of such Common Shares on the Exercise Date unless the share registers maintained by the transfer agent for the Common Shares shall be closed on such date, in which case the Common Shares so subscribed for shall be deemed to have been issued, and such Person or Persons shall be deemed to have become the holder or holders of record of such Common Shares on the date on which such registers were reopened and such Common Shares shall be issued at the Exercise Price in effect on the Exercise Date. To the extent the opening of the registers remains within the control of the Warrant Agent, the Company and the Warrant Agent shall cause such registers to be open on Business Days.

- (2) Within three (3) Business Days following the due exercise of a Warrant pursuant to Section 4.1, the Warrant Agent shall deliver to the Company a notice setting forth the particulars of all Warrants exercised, and the persons in whose names the Common Shares are to be issued (as applicable) and the addresses of such holders of the Common Shares.
- (3) Subject to Section 4.1(3), within five (5) Business Days of the due exercise of a Warrant pursuant to Section 4.1, or within (10) Business Days of the due exercise of a Warrant if such exercise would result in a fraction of a Common Share, the Company shall cause its transfer agent to mail to the person in whose name the Common Shares so subscribed for are to be issued, as specified in the Notice of Exercise completed on the Warrant Certificate, to the CDS or DTC DWAC coordinates specified in the Notice of Exercise, a certificate or certificates for the Common Shares to which the Warrantholder is entitled and, if applicable, shall cause the Warrant Agent to mail a Warrant Certificate representing any Warrants not then exercised.
- (4) If at the time of exercise of the Warrants there remain trading restrictions on the Common Shares acquired upon such exercise pursuant to applicable securities legislation or policy of any applicable regulatory body, the Company may, upon the advice of Counsel, endorse any Common Share certificates to such effect. Furthermore, the Company shall, or its Counsel shall, notify the Warrant Agent in writing of any trading restrictions on the Common Shares acquired upon such exercise pursuant to applicable securities legislation or policy of any applicable regulatory body. Unless and until advised in writing by the Company or its Counsel that a specific legend and trading restrictions apply to the Common Shares, the Warrant Agent shall be entitled to assume that no specific legend is required and that there are no trading restrictions on the Common Shares.

# 4.3 Subscription for Less than Entitlement

The holder of any Warrant Certificate may subscribe for and purchase a whole number of Common Shares that is less than the number that the holder is entitled to purchase pursuant to the surrendered Warrant Certificate. In such event, the holder thereof shall be entitled to receive, without charge except as aforesaid, a new Warrant Certificate in respect of the balance of the Common Shares which such holder was entitled to purchase pursuant to the surrendered Warrant Certificate and which was not then purchased.

#### 4.4 No Fractional Common Shares

Notwithstanding anything to the contrary in this Indenture, the Company shall not be required to issue fractional Common Shares in satisfaction of its obligations hereunder. If any fractional interest in a Common Share would, except for the provisions of this Section 4.4, be deliverable upon the exercise of a Warrant, the Company shall in lieu of delivering the fractional Common Shares therefor satisfy the right to receive such fractional interest by payment to the holder of such Warrant of an amount in funds equal (computed in the case of a fraction of a cent to the next lower cent) to the value of the right to acquire such fractional interest on the basis of the Current Market Price at the Exercise Date. The minimum amount for payment pursuant to this Section shall be \$1.00.

#### 4.5 Expiration of Warrant Certificates

After the Time of Expiry, all rights under any Warrant or this Indenture in respect of which the right of subscription and purchase herein and therein provided for shall not theretofore have been exercised shall wholly cease and terminate and such Warrant shall be void and of no effect.

#### 4.6 Cancellation of Surrendered Warrants

All Warrant Certificates surrendered to the Warrant Agent pursuant to the provisions of this Indenture shall be cancelled by the Warrant Agent and the Warrant Agent shall record the cancellation of such Warrant Certificates on the register of holders maintained by the Warrant Agent pursuant to subsection 3.2(1). The Warrant Agent shall, if requested in writing by the Company, furnish or cause to be furnished to the Company a certificate identifying the Warrant Certificates so cancelled and the number of Common Shares which could have been purchased pursuant to each cancelled Warrant Certificate. All Warrants represented by Warrant Certificates that have been duly cancelled shall be without further force or effect whatsoever.

#### 4.7 Accounting and Recording

- (1) The Warrant Agent shall promptly account to the Company with respect to Warrants exercised and forward to the Company (or into an account or accounts of the Company with the bank or trust company designated by the Company for that purpose) all monies received on the purchase of Common Shares through the exercise of Warrants. All such monies, and any securities or other instruments from time to time received by the Warrant Agent, shall be received in trust for, and shall be segregated and kept apart by the Warrant Agent in trust for, the Company.
- (2) The Warrant Agent shall record the particulars of the Warrant Certificates exercised which shall include the name or names and addresses of the Persons who become holders of Common Shares on exercise and the Exercise Date and Warrant Certificate number.

# 4.8 RESERVED.

# ARTICLE V ADJUSTMENT OF SUBSCRIPTION RIGHTS AND EXERCISE PRICE

# 5.1 Adjustment of Exercise Price and Number of Common Shares Purchasable Upon Exercise

The Exercise Price and the number of Common Shares purchasable upon exercise of Warrants shall be subject to adjustment from time to time in the events and in the manner provided in the Warrant Certificate.

- (1) The Warrant Agent shall be entitled to act and rely on any adjustment calculations by the Company or the Company's Auditors.
- (2) On the happening of each and every such event set out in Section 5.1, the applicable provisions of the Warrant Certificate, including the Exercise Price, shall, *ipso facto*, be deemed to be amended accordingly and the Company shall take all necessary action so as to comply with such provisions as so amended.

#### 5.2 Postponement of Subscription

In any case in which the application of Section 5.1 shall require that an adjustment shall be effective immediately after a record date for an event referred to herein, the Company may defer, until the occurrence of such an event:

- (a) issuing to the Warrantholder of any Warrant exercised after such record date and before the occurrence of such event, the additional Common Shares issuable upon such exercise by reason of the adjustment required by such event, and
- (b) delivering to such Warrantholder any distributions declared with respect to such additional Common Shares after such Exercise Date and before such event:

provided, however, that the Company shall deliver or cause to be delivered to such Warrantholder, an appropriate instrument evidencing such Warrantholder's right, upon the occurrence of the event requiring the adjustment, to an adjustment in the Exercise Price and/or the number of Common Shares purchasable on the exercise of any Warrant and to such distributions declared with respect to any additional Common Shares issuable on the exercise of any Warrant.

# 5.3 Notice of Adjustment of Exercise Price and Number of Common Shares Purchasable Upon Exercise

(1) At least ten (10) Business Days prior to the effective date or record date, as the case may be, of any event which requires or might require adjustment in any of the subscription rights pursuant to this Warrant Certificate, including the Exercise Price and the number of Common Shares which are purchasable upon the exercise thereof, the Company shall be required to (a) file with the Warrant Agent a certificate of the Company specifying the particulars of such event (including the record date or the effective date for such event) and, if determinable, the required adjustment and the computation of such adjustment; and (b) give notice to the Warrantholders of the particulars of such event (including the record date or the effective date for such event) and, if determinable, the required adjustment. Notice to the Warrantholders shall be given in the manner specified in Section 3.6.

- (2) In case any adjustment for which such notice has been given is not then determinable, the Company shall promptly after such adjustment is determinable (a) file with the Warrant Agent a computation of such adjustment; and (b) give notice to the Warrantholders of the adjustment. Notice to the Warrantholders shall be given in the manner specified in Section 3.6.
- (3) The Warrant Agent may, absent manifest error, for all purposes of the adjustment act and rely upon the certificate of the Company or of the Company's Auditors submitted to it pursuant to subsection 5.3(1) and on the accuracy of such certificate, calculations and formulas contained therein.

# ARTICLE VI PURCHASES BY THE COMPANY

#### 6.1 Purchases of Warrants for Cancellation

The Company may, at any time and from time to time, purchase Warrants by invitation for tender, by private contract or otherwise (which shall include a purchase through an investment dealer or firm holding membership on a Canadian stock exchange) on such terms as the Company may determine. All Warrants purchased pursuant to the provisions of this Section 6.1 shall be forthwith delivered to, cancelled and destroyed by the Warrant Agent and shall not be reissued.

# 6.2 Optional Purchases by the Company

Subject to applicable law, the Company may from time to time purchase on any stock exchange, in the open market, by private agreement or otherwise any of the Warrants. Any such purchase shall be made at the lowest price or prices at which, in the opinion of the Directors, such Warrants are then obtainable, plus reasonable costs of purchase, and may be made in such manner, from such Persons, and on such other terms as the Company in its sole discretion may determine. The Warrant Certificates representing the Warrants purchased pursuant to this Section 6.2 shall forthwith be delivered to and cancelled by the Warrant Agent.

# ARTICLE VII COVENANTS OF THE COMPANY

# 7.1 Covenants of the Company

The Company covenants with the Warrant Agent for the benefit of the Warrantholders and the Warrant Agent that so long as any Warrants remain outstanding and may be exercised:

- (a) the Company will at all times maintain its existence and will carry on and conduct its business in a prudent manner in accordance with industry standards and good business practice, and will keep or cause to be kept proper books of account in accordance with applicable law;
- (b) the Company will reserve and keep available a sufficient number of Common Shares for issuance upon the exercise of Warrants issued by the Company;
- (c) the Company will cause the Common Shares from time to time subscribed for pursuant to the Warrants issued by the Company hereunder, in the manner herein provided, to be duly issued in accordance with the Warrants and the terms hereof;
- (d) the Company will cause the certificates representing the Common Shares from time to time to be acquired, pursuant to the Warrants in the manner herein provided, to be duly issued and delivered in accordance with the Warrants and the terms hereof;
- (e) the Company shall make all requisite filings under the Securities Act (Ontario), the Securities Act (British Columbia) or the Securities Act (Alberta) and the regulations made thereunder including those necessary to remain a reporting issuer not in default of any requirement of such acts and regulations;
- (f) the Company shall use all reasonable efforts to maintain the listing of the Common Shares on the TSX (or such other recognized stock exchange as may be agreed upon by the Company and the Agent) and to have the Common Shares issued pursuant to the exercise of the Warrants listed and posted for trading on the TSX (or such other recognized stock exchange as may be agreed upon by the Company and the Agent) as expeditiously as possible;
- (g) all Common Shares that shall be issued by the Company upon exercise of the rights provided for herein shall be issued as fully paid and non-assessable;
- (h) the Company will perform and carry out all of the acts or things to be done by it as provided in this Indenture;
- (i) the Company will promptly advise the Warrant Agent and the Warrantholders in writing of any default under the terms of this Indenture; and
- (j) the Company confirms that as at the date of the execution of this Indenture it has a class of securities registered pursuant to Section 12 of the Exchange Act. The Company covenants that in the event that such registration or reporting obligation shall be terminated by the Company in accordance with the Exchange Act, the Company shall promptly deliver to the Warrant Agent an officers' certificate notifying the Warrant Agent of such termination and such other information as the Warrant Agent may require at the time. The Company acknowledges that the Warrant Agent is relying upon the foregoing covenants in order to meet certain SEC obligations with respect to those clients who are filing with the SEC.

#### 7.2 Warrant Agent's Remuneration and Expenses

The Company covenants that it will pay to the Warrant Agent from time to time reasonable remuneration for its services hereunder and will pay or reimburse the Warrant Agent upon its request for all reasonable expenses, disbursements and advances incurred or made by the Warrant Agent in the administration or execution of the duties hereby created, except any such expense, disbursement or advance as may arise out of or result from the gross negligence, wilful misconduct or fraud of the Warrant Agent. Any amount owing hereunder and remaining unpaid 30 days from the invoice date will bear interest at the then current rate charged by the Warrant Agent against unpaid invoices and shall be payable upon demand. This Section 7.2 shall survive the termination of this Indenture and the removal or resignation of the Warrant Agent.

#### 7.3 Performance of Covenants by Warrant Agent

Subject to Section 11.6, if the Company shall fail to perform any of its covenants contained in this Warrant Indenture and the Company has not rectified such failure within twenty-five (25) Business Days after either giving notice of such default pursuant to subsection 7.1(i) or receiving written notice from the Warrant Agent of such failure, the Warrant Agent may notify the Warrantholders in the manner provided in Section 3.6 of such failure on the part of the Company or, subject to Section 11.1, may itself perform any of the covenants capable of being performed by it, but shall be under no obligation to perform such covenants or to notify the Warrantholders of such performance by it. All reasonable sums expended or advanced by the Warrant Agent in so doing shall be repayable as provided in Section 7.2. No such performance, expenditure or advance by the Warrant Agent shall relieve the Company of any default hereunder or of its continuing obligations under the covenants herein contained.

# 7.4 Securities Filings

- (1) If, in the opinion of Counsel, any filing is required to be made with any governmental or other authority in Canada (including the securities regulatory authorities or any exchange or quotation system upon which any securities of the Company are listed or quoted for trading), or any other step is required before any Common Shares issuable upon the exercise of Warrants by a Warrantholder may properly and legally be issued in Canada, the Company covenants that it will take such action so required at its own expense.
- (2) The Company will give written notice of the issue of Common Shares pursuant to the exercise of Warrants, in such detail as may be required, to each securities administrator in each jurisdiction in which there is legislation requiring the giving of such notice and to the TSX.

# 7.5 Certificates of No Default

At any time if requested by the Warrant Agent, the Company shall deliver to the Warrant Agent an officers' certificate stating that the Company has complied to the best of its knowledge, in all material respects, with all covenants, conditions or other requirements contained in this Indenture. In the event that the Company has not complied, in all material respects, with all the covenants and conditions contained herein, it will advise the Warrant Agent and the holders of such default as soon as reasonably practicable, specifying the covenant, condition or other requirement which has not been complied with and giving particulars of such non-compliance.

#### ARTICLE VIII ENFORCEMENT

#### 8.1 Suits by Warrantholders

- (1) Warrantholders May Not Sue. Except to the extent that the rights of an individual Warrantholder or group of Warrantholders would be prejudiced thereby, no Warrantholder has the right to institute any action or proceeding or to exercise any other remedy authorized hereunder for the purpose of enforcing any right on behalf of the Warrantholders as a whole or for the execution of any trust or power hereunder or for the appointment of a liquidator or receiver and manager or for a receiving order under the Bankruptcy and Insolvency Act (Canada) or to have the Company wound up or to file or prove a claim in any liquidation or bankruptcy proceedings, unless the Warrant Agent has received a Warrantholders' Request directing it to take the requested action and has been provided with sufficient funds or other security and/or such indemnity satisfactory to the Warrant Agent in respect of the costs, expenses and liabilities that may be incurred by it in so proceeding and the Warrant Agent has failed to act within a reasonable time thereafter. If the Warrant Agent has so failed to act, but not otherwise, any Warrantholder acting on behalf of all Warrantholders will be entitled to take any of the proceedings that the Warrant Agent might have taken hereunder. No Warrantholder has any right in any manner whatsoever to effect, disturb or prejudice the rights hereby created by its action or to enforce any right hereunder or under any Warrant, except subject to the conditions and in the manner herein provided. Any money received as a result of a proceeding taken by any Warrantholder on behalf of all the Warrantholders hereunder must be forthwith paid to the Warrant Agent.
- (2) Warrant Agent not Required to Possess Warrants. All rights of action under this Indenture may be enforced by the Warrant Agent without the possession of any of the Warrants or the production thereof on any trial or other proceedings relative thereto.
- (3) Warrant Agent May Institute Proceedings. The Warrant Agent shall be entitled and empowered, either in its own name or as Warrant Agent of an express trust, or as attorney-in-fact for the Warrantholders, or in any one or more of such capacities, to file such proof of debt, amendment of proof of debt, claim, petition or other document as may be necessary or advisable in order to have the claim of the Warrant Agent and the Warrantholders allowed in any insolvency, bankruptcy, liquidation or other judicial proceedings relative to the Company or its creditors or relative to or affecting its property. The Warrant Agent is hereby irrevocably appointed (and the successive respective Warrantholders by taking and holding the same shall be conclusively deemed to have so appointed the Warrant Agent) the true and lawful attorney-in-fact of the respective Warrantholders with authority to

make and file in the respective names of the Warrantholders or on behalf of the Warrantholders as a class, subject to deduction from any such claims of the amounts of any claims filed by any of the Warrantholders themselves if and to the extent permitted hereunder, any proof of debt, amendment of proof of debt, claim, petition or other document in any such proceedings and to receive payment of any sums becoming distributable on account thereof, and to execute any such other papers and documents and to do and perform any and all such acts and things for and on behalf of the Warrantholders, as may be necessary or advisable in the opinion of the Warrant Agent acting and relying on the advice of Counsel, in order to have the respective claims of the Warrant Agent and of the Warrantholders against the Company or its property allowed in any such proceeding, and to receive payment of or on account of such claims; provided, however, that nothing contained in this Indenture shall be deemed to give the Warrant Agent, unless so authorized by Extraordinary Resolution, any right to accept or consent to any plan of reorganization or otherwise by action of any character in such proceeding to waive or change in any way any right of any Warrantholder. The Warrant Agent shall also have the power, but not the obligation, at any time and from time to time to institute and to maintain such suits and proceedings as it may be advised shall be necessary or advisable to preserve and protect its interests and the interests of the Warrantholders. Any such suit or proceeding instituted by the Warrant Agent may be brought in the name of the Warrant Agent as Warrant Agent of an express trust, and any recovery of judgment shall be for the rateable benefit of the Warrantholders subject to the provisions of this Indenture. In any proceeding brought by the Warrant Agent (and also any proceeding in which a declaratory judgment of a court may be sought as to the interpretation or construction of any provision of this Indenture, to which the Warra

(4) Subject to the provisions of this Section and otherwise in this Indenture, all or any of the rights conferred upon a Warrantholder by the terms of a Warrant may be enforced by such Warrantholder by appropriate legal proceedings without prejudice to the right which is hereby conferred upon the Warrant Agent to proceed in its own name to enforce each and all of the provisions herein contained for the benefit of all of the Warrantholders from time to time.

#### 8.2 Limitation of Liability

The obligations hereunder are not personally binding upon nor shall resort hereunder be had to, the private property of any of the past, present or future Directors or Shareholders of the Company or of any successor corporation (as defined herein) or of any of the past, present or future officers, employees or agents of the Company or of any successor corporation, but only the property of the Company or of any successor corporation shall be bound in respect hereof.

# ARTICLE IX MEETINGS OF WARRANTHOLDERS

# 9.1 Right to Convene Meetings

The Warrant Agent may at any time and from time to time, and shall on receipt of a written request of the Company or of a Warrantholders' Request and upon receiving sufficient funds and being indemnified to its reasonable satisfaction by the Company or by the Warrantholders signing such Warrantholders' Request against the cost of which may be incurred in connection with the calling and holding of such meeting, convene a meeting of the Warrantholders. In the event of the Warrant Agent failing to so convene a meeting within fifteen (15) Business Days after receipt of such written request of the Company or Warrantholders' Request, funds and indemnity given as aforesaid, the Company or such Warrantholders, as the case may be, may convene such meeting. Every such meeting shall be held in the City of Toronto or at such other place as may be approved or determined by the Warrant Agent unless the meeting was convened by the Company or by Warrantholders as a result of the Warrant Agent's failure or refusal to convene the meeting, in which case the meeting shall be held at such place as may be determined by the Company or by the Warrantholders convening the meeting, as the case may be.

#### 9.2 Notice

At least twenty-one (21) Business Days prior notice of any meeting of Warrantholders shall be given to the Warrantholders in the manner provided for in Section 3.6 and a copy of such notice shall be sent by mail to the Warrant Agent (unless the meeting has been called by the Warrant Agent) and to the Company (unless the meeting has been called by the Company). Such notice shall state the time when and the place where the meeting is to be held, shall state briefly the general nature of the business to be transacted thereat and shall contain such information as is reasonably necessary to enable the Warrantholders to make a reasoned decision on the matter, but it shall not be necessary for any such notice to set out the terms of any resolution to be proposed nor any of the provisions of this Article IX. The notice convening any such meeting may be signed by an appropriate officer of the Warrant Agent or by the Company or by the Warrantholders convening the meeting.

#### 9.3 Chairman

An individual (who need not be a Warrantholder) nominated in writing by the Warrant Agent shall be chairman of the meeting and if no individual is so nominated, or if the individual so nominated is not present within fifteen minutes from the time fixed for the holding of the meeting, or if such Person is unable or unwilling to act as chairman, the Warrantholders present in person or by proxy shall choose some individual present to be chairman.

#### 9.4 Quorum

Subject to the provisions of Section 9.11, at any meeting of the Warrantholders a quorum shall consist of Warrantholders present in person or by proxy and entitled to purchase at least 25% of the aggregate number of Common Shares which could be purchased pursuant to all the then outstanding Warrants, provided that at least two Persons entitled to vote thereat are personally present (except in the case where there is only one Warrantholder). If a quorum of the

Warrantholders shall not be present within thirty minutes from the time fixed for holding any meeting, the meeting, if summoned by the Warrantholders or on a Warrantholders' Request, shall be dissolved; but in any other case the meeting shall be adjourned to the same day in the next week (unless such day is not a Business Day in which case it shall be adjourned to the next following Business Day) at the same time and place and subject to Section 9.11 no notice of the adjournment need be given. Any business may be brought before or dealt with at an adjourned meeting which might have been dealt with at the original meeting in accordance with the notice calling the same. No business shall be transacted at any meeting unless a quorum is present at the commencement of business. At the adjourned meeting the Warrantholders present in person or by proxy shall form a quorum and may transact the business for which the meeting was originally convened, notwithstanding that they may not be entitled to purchase at least 25% of the aggregate number of Common Shares which may be purchased pursuant to all then outstanding Warrants.

#### 9.5 Power to Adjourn

The chairman of any meeting at which a quorum of the Warrantholders is present may, with the consent of the meeting, adjourn any such meeting, and no notice of such adjournment need be given except such notice, if any, as the meeting may prescribe.

#### 9.6 Show of Hands

Every question submitted to a meeting shall be decided in the first place by a majority of the votes given on a show of hands except that votes on an Extraordinary Resolution shall be given in the manner hereinafter provided. At any such meeting, unless a poll is duly demanded as herein provided, a declaration by the chairman that a resolution has been carried or carried unanimously or by a particular majority or lost or not carried by a particular majority shall be conclusive evidence of the fact.

# 9.7 Poll and Voting

- (1) On every Extraordinary Resolution, and on any other question submitted to a meeting and after a vote by show of hands when demanded by the chairman or by one or more of the Warrantholders acting in Person or by proxy, a poll shall be taken in such manner as the chairman shall direct. Questions other than those required to be determined by Extraordinary Resolution shall be decided by a majority of votes cast on the poll.
- (2) On a show of hands, every Person who is present and entitled to vote, whether as a Warrantholder or as proxy for one or more absent Warrantholders, or both, shall have one vote. On a poll, each Warrantholder present in person or represented by a proxy duly appointed by instrument in writing shall be entitled to one vote in respect of each Common Share which he is entitled to purchase pursuant to the Warrant or Warrants then held or represented by him. A proxy need not be a Warrantholder. The chairman of any meeting shall be entitled, both on a show of hands and on a poll, to vote in respect of the Warrants, if any, held or represented by him.

# 9.8 Regulations

- (1) Subject to the provisions of this Indenture, the Warrant Agent or the Company with the approval of the other party may from time to time make and from time to time vary such regulations as it shall think fit:
  - (a) for the deposit of voting certificates and instruments appointing proxies at such place and time as the Warrant Agent, the Company or the Warrantholders convening the meeting, as the case may be, may in the notice convening the meeting direct;
  - (b) for the deposit of voting certificates and instruments appointing proxies at some approved place or places other than the place at which the meeting is to be held and enabling particulars of such instruments appointing proxies to be mailed, delivered or sent by e-mail transmission before the meeting to the Company or to the Warrant Agent at the place where the same is to be held and for the voting of proxies so deposited as though the instruments themselves were produced at the meeting;
  - (c) for the form of the voting certificates and instrument of proxy and the manner in which the form of proxy may be executed; and
  - (d) generally for the calling of meetings of Warrantholders and the conduct of business thereat including setting a record date for Warrantholders entitled to receive notice of or to vote at such meeting.
- (2) Any regulations so made shall be binding and effective and the votes given in accordance therewith shall be valid and shall be counted. Save as such regulations may provide, or as may be expressly provided for herein the only Persons who shall be recognized at any meeting as a Warrantholder, or be entitled to vote or be present at the meeting in respect thereof (subject to Section 9.9) shall be Warrantholders or Persons holding voting certificates or proxies of Warrantholders.

#### 9.9 Company, Warrant Agent and Warrantholders May be Represented

The Company and the Warrant Agent, by their respective directors, officers and employees, and the Counsel for the Company, for the Warrant Agent and for any Warrantholder may attend any meeting of the Warrantholders, but shall have no vote as such, except in their capacity as Warrantholders.

# 9.10 Powers Exercisable by Extraordinary Resolution

In addition to all other powers conferred upon them by any other provisions of this Indenture or by law, the Warrantholders at a meeting shall have the power, exercisable from time to time by Extraordinary Resolution, subject to applicable law and any regulatory approval:

(a) to amend, alter or repeal any Extraordinary Resolution previously passed or sanctioned by the Warrantholders;

- (b) to direct or to authorize the Warrant Agent, subject to its prior indemnification pursuant to subsection 11.1(2), to enforce any of the covenants on the part of the Company contained in this Indenture or the Warrant Certificates or to enforce any of the rights of the Warrantholders in any manner specified in such Extraordinary Resolution or to refrain from enforcing any such covenant or right; and
- (c) to remove the Warrant Agent and appoint a successor warrant agent in the manner specified in Section 11.7 hereof.

# 9.11 Meaning of Extraordinary Resolution

- (1) The expression "Extraordinary Resolution" when used in this Indenture means, subject as hereinafter provided in this Section 9.11 and in Section 9.14, a resolution
  - (i) passed at a meeting of the holders of Warrants duly convened for that purpose and held in accordance with the provisions of this Article IX at which there are holders of Warrants present in person or represented by proxy representing at least 25% of the aggregate number of all the then outstanding Warrants and passed by the affirmative vote of Warrantholders representing not less than 66 2/3% of the aggregate number of all the then outstanding Warrants represented at the meeting and voted on the poll upon such resolution; or (ii) adopted by an instrument in writing signed by the holders of Warrants representing not less than 66 2/3% percent of the aggregate number of all the then outstanding Warrants.
- (2) If, at any meeting called for the purpose of passing an Extraordinary Resolution, Warrantholders entitled to purchase at least 25% of the aggregate number of all the then outstanding Warrants are not present in person or by proxy within 30 minutes after the time appointed for the meeting then the meeting, if convened by Warrantholders or on a Warrantholders' Request, shall be dissolved; but in any other case it shall stand adjourned to such day, being not less than ten (10) Business Days later, and to such place and time as may be appointed by the chairman. Not less than three (3) days' prior notice shall be given of the time and place of such adjourned meeting in the manner provided for in Section 3.6. Such notice shall state that at the adjourned meeting the Warrantholders present in person or by proxy shall form a quorum but it shall not be necessary to set forth the purposes for which the meeting was originally called or any other particulars. At the adjourned meeting the Warrantholders present in person or by proxy shall form a quorum and may transact the business for which the meeting was originally convened and a resolution proposed at such adjourned meeting and passed by the requisite vote as provided in subsection 9.11(1) shall be an Extraordinary Resolution within the meaning of this Indenture notwithstanding that Warrantholders representing at least 25% of all the then outstanding Warrants are not present in person or by proxy at such adjourned meeting.
- (3) Votes on an Extraordinary Resolution shall always be given on a poll and no demand for a poll on an Extraordinary Resolution shall be necessary.

#### 9.12 Powers Cumulative

It is hereby declared and agreed that any one or more of the powers or any combination of the powers in this Indenture stated to be exercisable by the Warrantholders by Extraordinary Resolution or otherwise may be exercised from time to time and the exercise of any one or more of such powers or any combination of powers from time to time shall not be deemed to exhaust the right of the Warrantholders to exercise such power or powers or combination of powers then or thereafter from time to time.

#### 9.13 Minutes

Minutes of all resolutions and proceedings at every meeting of Warrantholders shall be made and duly entered in books to be provided from time to time for that purpose by the Company, and any such minutes as aforesaid, if signed by the chairman of the meeting at which such resolutions were passed or proceedings had, shall be prima facie evidence of the matters therein stated and, until the contrary is proved, every such meeting in respect of the proceedings of which minutes shall have been made shall be deemed to have been duly convened and held, and all resolutions passed or proceedings taken thereat shall be deemed to have been duly passed and taken.

#### 9.14 Instruments in Writing

All actions which may be taken and all powers that may be exercised by the Warrantholders at a meeting held as provided in this Article IX may also be taken and exercised by Warrantholders representing at least 66 2/3% of the aggregate number of all the then outstanding Warrants by an instrument in writing signed in one or more counterparts by such Warrantholders in person or by attorney duly appointed in writing, and the expression "Extraordinary Resolution" when used in this Indenture shall include an instrument so signed.

#### 9.15 Binding Effect of Resolutions

Every resolution and every Extraordinary Resolution passed in accordance with the provisions of this Article IX at a meeting of Warrantholders shall be binding upon all the Warrantholders, whether present at or absent from such meeting, and every instrument in writing signed by Warrantholders in accordance with Section 9.14 shall be binding upon all the Warrantholders, whether signatories thereto or not, and each and every Warrantholder and the Warrant Agent (subject to receiving prior indemnification pursuant to subsection 11.1(2)) shall be bound to give effect accordingly to every such resolution and instrument in writing. In the case of an instrument in writing the Warrant Agent shall give notice in the manner contemplated in Section 3.6 and Section 13.1 of the effect of the instrument in writing to all Warrantholders and the Company as soon as is reasonably practicable.

#### 9.16 Holdings by Company Disregarded

In determining whether Warrantholders are present at a meeting of Warrantholders for the purpose of determining a quorum or have concurred in any consent, waiver, Extraordinary Resolution, Warrantholders' Request or other action under this Indenture, Warrants owned legally or beneficially by the Company or any Subsidiary of the Company or any other Affiliate of the Company, as determined in accordance with the provisions of Section 13.6, shall be disregarded. The Company shall provide, upon the written request of the Warrant Agent, a certificate as to the registration particulars of any Warrants held by the Company.

## ARTICLE X SUPPLEMENTAL INDENTURES

#### 10.1 Provision for Supplemental Indentures for Certain Purposes

From time to time the Company (when properly authorized by action by the Directors) and the Warrant Agent may, subject to the provisions hereof, and they shall, when so directed in accordance with the provisions hereof and regulatory approval, execute and deliver by their proper officers, indentures, or instruments supplemental hereto, which thereafter shall form part hereof, for any one or more or all of the following purposes:

- (a) providing for the issue of additional Warrants hereunder and any consequential amendments hereto as may be required by the Warrant Agent, relying on advice of Counsel:
- (b) setting forth any adjustments resulting from the application of the provisions of Section 5.1 or any modification affecting the rights of Warrantholders hereunder on exercise of the Warrants, provided that any such adjustments or modifications shall be subject to compliance with all regulatory requirements (including the rules of any stock exchange or over-the-counter market on which the Common Shares are then listed or quoted for trading);
- (c) adding to the provisions hereof such additional covenants and enforcement provisions as, in the opinion of Counsel, are necessary or advisable, provided that the same are not in the opinion of the Warrant Agent, relying on the advice of Counsel, prejudicial to the rights or interests of the Warrantholders as a group;
- (d) giving effect to any Extraordinary Resolution passed as provided in Article IX;
- (e) making such provisions not inconsistent with this Indenture as may be necessary or desirable with respect to matters or questions arising hereunder, provided that such provisions are not, in the opinion of the Warrant Agent, relying on the advice of Counsel, prejudicial to the rights or interests of the Warrantholders as a group;
- (f) for any other purpose not inconsistent with the terms of this Indenture, including the correction or rectification of any ambiguities, defective or inconsistent provisions, errors, mistakes or omissions herein, provided that in the opinion of the Warrant Agent, relying on the advice of Counsel, the rights or interests of the Warrant Agent and of the Warrantholders as a group are in no way prejudiced thereby.

#### 10.2 Successor Companies

In the case of the consolidation, amalgamation, merger or transfer of the undertaking or assets of the Company as an entirety or substantially as an entirety to another corporation ("successor corporation"), the successor corporation resulting from such consolidation, amalgamation, merger or transfer (if not the Company) shall expressly assume, by supplemental indenture satisfactory in form to the Warrant Agent and executed and delivered to the Warrant Agent, the due and punctual performance and observance of each and every covenant and condition of this Indenture to be performed and observed by the Company.

## ARTICLE XI CONCERNING THE WARRANT AGENT

#### 11.1 Indenture Legislation

- (1) If, and to the extent, any provision of this Indenture limits, qualifies or conflicts with a mandatory requirement of applicable statutes of Canada and its provinces and the regulations under those statutes relating to warrant indentures ("Applicable Legislation"), such mandatory requirement shall prevail.
- (2) The Company and the Warrant Agent agree that each will at all times in relation to this Indenture and any action to be taken hereunder observe and comply with and be entitled to the benefit of Applicable Legislation.

#### 11.2 Rights and Duties of Warrant Agent

In the exercise of the rights and duties prescribed or conferred by the terms of this Indenture, the Warrant Agent shall act honestly and in good faith with a view to the best interests of the Warrantholders and shall exercise that degree of care, diligence and skill that a reasonably prudent warrant agent would exercise in comparable circumstances. No provision of this Indenture shall be construed to relieve the Warrant Agent from, or require any Person to indemnify the Warrant Agent against, liability for its own gross negligence, wilful misconduct or fraud. The duties and obligations of the Warrant Agent shall be determined solely by the provisions hereof and, accordingly, the Warrant Agent shall only be responsible for the performance of such duties and obligations as it has undertaken herein. The Warrant Agent shall retain the right not to act and shall not be held liable for refusing to act in circumstances that require the delivery to or receipt by the Warrant Agent of documentation unless it has received clear and reasonable documentation which complies with the terms of this Indenture. Such documentation must not require the exercise of any discretion or independent judgement other than as contemplated by this Indenture. The Warrant Agent shall incur no liability with respect to the delivery or non-delivery of any certificate or certificates whether delivered by hand, mail or any other means, provided that it has complied with the terms of this Indenture in respect of the discharging of its obligations in respect of the delivery of such certificates. None of the provisions contained in this Indenture shall require the Warrant Agent to expend or to risk its own funds or otherwise to incur financial liability in the performance of any of its duties or in the exercise of any of its rights or powers unless indemnified and funded as aforesaid.

- (2) The obligation of the Warrant Agent to commence or continue any act, action or proceeding for the purpose of enforcing any rights of the Warrant Agent or the Warrantholders hereunder shall be conditional upon the Warrantholders furnishing, when required by notice in writing by the Warrant Agent, sufficient funds to commence or to continue such act, action or proceeding and an indemnity reasonably satisfactory to the Warrant Agent to protect and to hold harmless the Warrant Agent, its officers, directors and employees against the costs, charges and expenses and liabilities to be incurred thereby and any loss and damage it may suffer by reason thereof.
- (3) The Warrant Agent may, before commencing or at any time during the continuance of any such act, action or proceedings, require the Warrantholders, at whose instance it is acting, to deposit with the Warrant Agent the Warrant Certificates held by them, for which the Warrant Agent shall issue receipts.
- (4) Every provision of this Indenture that by its terms relieves the Warrant Agent of liability or entitles it to rely upon any evidence submitted to it is subject to the provisions of Section 11.12.

#### 11.3 Evidence, Experts and Advisers

- (1) In addition to the reports, certificates, opinions and evidence required by this Indenture, the Company shall furnish to the Warrant Agent such additional evidence of compliance with any provision hereof, and in such form as may be prescribed by Applicable Legislation or as the Warrant Agent may reasonably require by written notice to the Company.
- (2) The Warrant Agent shall be protected in acting and relying upon any written notice, request, waiver, consent, certificate, receipt, statutory declaration or other paper or document furnished to it, not only as to its due execution and the validity and effectiveness of its provisions, but also as to the truth of and acceptability of any information therein contained which it in good faith believes to be genuine and what it purports to be.
- (3) Proof of the execution of an instrument in writing, including a Warrantholders' Request, by any Warrantholder may be made by the certificate of a notary public, or other officer with similar powers, that the Person signing such instrument acknowledged to him the execution thereof, or by an affidavit of a witness to such execution or in any other manner which the Warrant Agent may consider adequate.
- (4) The Warrant Agent may employ or retain such Counsel, accountants, appraisers or other experts or advisers as it may reasonably require for the purpose of determining and discharging its duties hereunder and shall not be responsible for any misconduct or negligence on the part of such experts or advisors who have been appointed and supervised with due care by the Warrant Agent. The fees of such Counsel and other experts shall be part of the Warrant Agent's fees hereunder. The Warrant Agent shall be fully protected in acting or not acting and relying, in good faith, in accordance with any opinion or instruction of such Counsel. Any remuneration so paid by the Warrant Agent shall be repaid to the Warrant Agent in accordance with Section 7.2.

#### 11.4 Action by Warrant Agent to Protect Interest

Subject to the provisions of this Indenture and Applicable Legislation, the Warrant Agent shall have power to institute and to maintain such actions and proceedings as it may consider necessary or expedient to preserve, protect or enforce its interests and the interests of the Warrantholders.

#### 11.5 Warrant Agent not Required to Give Security

The Warrant Agent shall not be required to give any bond or security in respect of the execution of the trusts and powers of this Indenture or otherwise.

#### 11.6 Protection of Warrant Agent

By way of supplement to the provisions of any law for the time being relating to trustees or warrant agents it is expressly declared and agreed as follows:

- (a) The Warrant Agent shall not be liable for or by reason of any statement of fact or recitals in this indenture or in the Warrant Certificates (except the representations contained in Section 11.8 or in the certificate of the Warrant Agent on the Warrant Certificates) or be required to verify the same, but all such statements or recitals are and shall be deemed to be made by the Company;
- (b) Nothing herein contained shall impose any obligation on the Warrant Agent to see to or to require evidence of the registration or filing (or renewal thereof) of this Indenture or any instrument ancillary or supplemental hereto;
- (c) The Warrant Agent shall not be bound to give notice to any Person or Persons of the execution hereof; and
- (d) The Warrant Agent shall not incur any liability or responsibility whatever or be in any way responsible for the consequence of any breach on the part of the Company of any of the covenants herein contained or of any acts of any Directors, officers, employees, agents or servants of the Company.

#### 11.7 Replacement of Warrant Agent; Successor by Merger

(1) The Warrant Agent may resign and be discharged from all further duties and liabilities hereunder, subject to this subsection 11.7(1), by giving to the Company not less than 30 days prior notice in writing or such shorter prior notice as the Company may accept as sufficient. The Warrantholders by Extraordinary Resolution shall have power at any time to remove the existing Warrant Agent and

to appoint a new warrant agent. In the event of the Warrant Agent resigning or being removed as aforesaid or being dissolved, becoming bankrupt, going into liquidation or otherwise becoming incapable of acting hereunder, the Company shall forthwith appoint a new warrant agent unless a new warrant agent has already been appointed by the Warrantholders; failing such appointment by the Company, the retiring Warrant Agent or any Warrantholder may apply to a justice of the Ontario Superior Court of Justice (the "Court"), at the Company's expense, on such notice as such justice may direct, for the appointment of a new warrant agent; but any new warrant agent so appointed by the Company or by the Court shall be subject to removal as aforesaid by the Warrantholders. Any new warrant agent appointed under any provision of this Section 11.7 shall be a company authorized to carry on the business of a transfer agent in the province of Ontario. On any such appointment the new warrant agent shall be vested with the same powers, rights, duties and responsibilities as if it had been originally named herein as Warrant Agent without any further assurance, conveyance, act or deed; but there shall be immediately executed, at the expense of the Company, all such conveyances or other instruments as may, in the opinion of Counsel, be necessary or advisable for the purpose of assuring the same to the new warrant agent, provided that, any resignation or removal of the Warrant Agent and appointment of a successor warrant agent shall have executed an appropriate instrument accepting such appointment and, at the request of the Company, the predecessor Warrant Agent, upon payment of its outstanding remuneration and expenses, shall execute and deliver to the successor warrant agent an appropriate instrument transferring to such successor warrant agent all rights and powers of the Warrant Agent hereunder.

- (2) Upon the appointment of a successor warrant agent, the Company shall promptly notify the Warrantholders thereof in the manner provided for in Section 3.6
- (3) This Indenture shall enure to the benefit of and be binding upon the parties hereto and their respective successors and assigns. The Company agrees that the Warrant Agent may assign its rights and duties under this Indenture to one of its affiliates without the need for any further notice to, or approval from, the Company.
- (4) Any Warrants certified but not delivered by a predecessor Warrant Agent may be certified by the new or successor warrant agent in the name of the predecessor or the new or successor warrant agent.

#### 11.8 Conflict of Interest

(1) The Warrant Agent represents to the Company that to the best of its knowledge at the time of execution and delivery hereof no material conflict of interest exists in its role as a warrant agent hereunder and agrees that in the event of a material conflict of interest arising hereafter it shall immediately notify the Company of the material conflict of interest with complete details of the conflict and such other information as the Company may reasonably request in connection therewith and, within ninety (90) days after ascertaining that it has such material conflict of interest, either eliminate the same or resign its trusts hereunder to a successor warrant agent approved by the Company and meeting the requirements set forth in subsection 11.7(1). Notwithstanding the foregoing provisions of this subsection 11.8(1), if any such material conflict of interest exists or hereinafter shall exist, the validity and enforceability of this Indenture and the Warrant Certificates shall not be affected in any manner whatsoever by reason thereof.

(2) Subject to subsection 11.8(1), the Warrant Agent, in its personal or any other capacity, may buy, lend upon and deal in securities of the Company and generally may contract and enter into financial transactions with the Company or any Subsidiary of the Company without being liable to account for any profit made thereby.

#### 11.9 Warrant Agent Not to be Appointed Receiver

The Warrant Agent and any Person related to the Warrant Agent shall not be appointed a receiver, a receiver and manager or liquidator of all or any part of the assets or undertaking of the Company.

#### 11.10 Payments by Warrant Agent

The forwarding of a cheque by the Warrant Agent will satisfy and discharge the liability for any amounts due to the extent of the sum or sums represented thereby (plus the amount of any tax deducted or withheld as required by law) unless such cheque is not honoured on presentation; provided that in the event of the non-receipt of such cheque by the payee, or the loss or destruction thereof, the Warrant Agent, upon being furnished with reasonable evidence of such non-receipt, loss or destruction and indemnity reasonably satisfactory to it, will issue to such payee a replacement cheque for the amount of such cheque.

#### 11.11 Deposit of Securities

The Warrant Agent shall not be responsible or liable in any manner whatsoever for the sufficiency, correctness, genuineness or validity of any security deposited with it.

#### 11.12 Act, Error, Omission etc.

The Warrant Agent shall not be liable for any error in judgement or for any act done or step taken or omitted by it in good faith, for any mistake, in fact or law, or for anything which it may do or refrain from doing in connection herewith except arising out of its own gross negligence, wilful misconduct or fraud.

#### 11.13 Indemnification

Without limiting any protection or indemnity of the Warrant Agent under any other provision hereof, or otherwise at law, the Company hereby agrees to indemnify and hold harmless the Warrant Agent and its directors, officers, agents and employees from and against any and all liabilities, losses, damages, penalties, claims, actions, suits, costs, expenses and disbursements, including reasonable legal or advisor fees and disbursements, of whatever kind and nature which may at any time be imposed on, incurred by or asserted against the Warrant Agent and its directors, officers, agents and employees in connection with the performance of its duties and obligations hereunder, other than such liabilities, losses, damages, penalties, claims, actions, suits, costs, expenses and disbursements arising by reason of gross negligence, wilful misconduct or fraud of the Warrant Agent and its directors, officers, agents and employees. This provision shall survive the resignation or removal of the Warrant Agent, or the termination of this Indenture.

The Warrant Agent shall not be under any obligation to prosecute or defend any action or suit in respect of this Indenture which, in the opinion of its counsel, may involve it in expense or liability, unless the Company shall, so often as required, furnish the Warrant Agent with satisfactory indemnity and funding against such expense or liability.

#### 11.14 Notice

The Warrant Agent shall not be bound to give any notice or do or take any act, action or proceeding by virtue of the powers conferred on it hereby unless and until it shall have been required to so under the terms hereof; nor shall the Warrant Agent be required to take notice of any default hereunder, unless and until notified in writing of such default, which notice shall distinctly specify the default desired to be brought to the attention of the Warrant Agent and in the absence of any such notice the Warrant Agent may for all purposes of this Indenture conclusively assume that no default has been made in the observance or performance of any of the representations, warranties, covenants, agreements or conditions contained herein. Any such notice shall in no way limit any discretion herein given the Warrant Agent to determine whether or not the trustee shall take action with respect to any default.

#### 11.15 Reliance by the Warrant Agent

The Warrant Agent may act on the opinion or advice obtained from Counsel to the Warrant Agent and shall, provided it acts in good faith in reliance thereon, not be responsible for any loss occasioned by doing so nor shall it incur any liability or responsibility for determining in good faith not to act upon such opinion or advice. The Warrant Agent may rely, and shall be protected in relying, upon any statement, request, direction or other paper or document believed by it to be genuine and to have been signed, sent or presented by or on behalf of the proper party or parties. The Warrant Agent may assume for the purposes of this Indenture that any address on the register of the Warrantholders is the holder's actual address and is also determinative as to residency and that the address of any transferee to whom any Common Shares are to be registered, as shown on the transfer document is the transferee's actual address and is also determinative as to residency of the transferee. The Warrant Agent shall have no obligation to ensure that legends appearing on the Warrant Certificates or Common Shares comply with regulatory requirements or Applicable Securities Laws.

#### 11.16 Privacy

The parties to this Warrant Indenture acknowledge that federal and/or provincial legislation that addresses the protection of individuals' personal information (collectively, "Privacy Laws") applies to obligations and activities under this Warrant Indenture. Despite any other provision of this Warrant Indenture, neither party shall take or direct any action that would contravene, or cause

the other party to contravene, applicable Privacy Laws. The Company shall, prior to transferring or causing to be transferred personal information to the Warrant Agent, obtain and retain required consents of the relevant individuals to the collection, use and disclosure of their personal information, or shall have determined that such consents either have previously been given upon which the parties can rely or are not required under applicable Privacy Laws. The Warrant Agent shall use commercially best efforts to ensure that its services hereunder comply with applicable Privacy Laws. Specifically, the Warrant Agent agrees: (a) to have a designated chief privacy officer; (b) to maintain policies and procedures to protect personal information and to receive and respond to any privacy complaint or inquiry; (c) to use personal information solely for the purposes of providing its services under or ancillary to this Warrant Indenture and not to use it for any other purpose except with the consent of or direction from the Company or the individual involved; (d) not to sell or otherwise improperly disclose personal information to any third party; and (e) to employ administrative, physical and technological safeguards to reasonably secure and protect personal information against loss, theft or unauthorized access, use or modification.

#### 11.17 Anti-Money Laundering

The Warrant Agent shall retain the right not to act and shall not be liable for refusing to act if, due to a lack of information or for any other reason whatsoever, the Warrant Agent, in its sole judgment, acting reasonably, determines that such act might cause it to be in noncompliance with any applicable anti-money laundering, anti-terrorist or economic sanction legislation, regulation or guideline. Further, should the Warrant Agent, in its sole judgment, acting reasonably, determine at any time that its acting under this Indenture has resulted in its being in non-compliance with any applicable anti-money laundering, anti-terrorist or economic sanction legislation, regulation or guideline, then it shall have the right to resign on 10 Business Days' prior written notice sent to the Company provided that (i) the Warrant Agent's written notice shall describe the circumstances of such non-compliance; and (ii) if such circumstances are rectified to the Warrant Agent's satisfaction within such 10-Business Day period, then such resignation shall not be effective.

#### 11.18 Force Majeure

Neither party to this Indenture shall be personally liable to the other, or held in breach of this Indenture, if prevented, hindered, or delayed in the performance or observance of any provision contained herein by reason of an act of God, riots, terrorism, acts of war, epidemics, governmental action or judicial order, earthquakes, or any other similar causes (including, but not limited to, mechanical, electronic or communication interruptions, disruptions or failures). Performance times under this Indenture shall be extended for a period of time equivalent to the time lost because of any delay that is excusable under this Section 11.18.

## ARTICLE XII ACCEPTANCE OF TRUSTS BY WARRANT AGENT

#### 12.1 Appointment and Acceptance of Functions

The Company hereby appoints the Warrant Agent under the terms and conditions set forth in this Indenture. The Warrant Agent hereby accepts the terms of this Indenture declared and provided for and agrees to perform the same upon the terms and conditions set forth herein.

#### ARTICLE XIII GENERAL

#### 13.1 Notice to the Company and the Warrant Agent

- (1) Unless herein otherwise expressly provided, any notice to be given hereunder to the Company and to the Warrant Agent shall be in writing and may be given by mail, or by e-mail (with original copy to follow by mail) or by personal delivery and shall be addressed as follows:
  - (a) if to the Company, to

Titan Medical Inc. 170 University Avenue Suite 1000 Toronto, Ontario M5H 3B3

Attention: Stephen Randall

E-mail: stephen@titanmedicalinc.com

with a copy to:

Borden Ladner Gervais LLP Bay Adelaide Centre, East Tower 22 Adelaide Street West, Suite 3400 Toronto, Ontario M5H 3E3

Attention: Manoj Pundit E-mail: mpundit@blg.com

(b) if to the Warrant Agent, to

Computershare Trust Company of Canada 100 University Avenue 11th Floor Toronto, Ontario M5J 2Y1

Attention: General Manager, Corporate Trust Department

E-mail: [●]

and shall be deemed to have been given, if delivered or sent by courier, on the date of delivery or, if mailed, on the third (3rd) Business Day following the date of the postmark on such notice or, if sent by e-mail, on the date of e-mail transmission. Any delivery made or sent by e-mail on a day other than a Business Day, or after 3:00 p.m. (Toronto time) on a Business Day, shall be deemed to be received on the next following Business Day.

- (2) The Company or the Warrant Agent, as the case may be, may from time to time give notice in the manner provided in subsection 13.1(1) of a change of address which, from the effective date of such notice and until changed by like notice, shall be the address of the Company or the Warrant Agent, as the case may be, for all purposes of this Indenture. A copy of any notice of change of address of the Company given pursuant to this subsection 13.1(2) shall be sent to the principal transfer office of the Warrant Agent in the City of Toronto, Ontario and shall be available for inspection by Warrantholders during normal business hours.
- (3) If, by reason of a strike, lockout or other work stoppage, actual or threatened, involving postal employees, any notice to be given to the Warrant Agent or to the Company hereunder could reasonably be considered unlikely to reach its destination, such notice shall be valid and effective only if it is delivered to an officer of the party to which it is addressed or if it is delivered to such party at the appropriate address provided in subsection 13.1(1) by e-mail or other means of prepaid, transmitted, recorded communication and any such notice delivered in accordance with the foregoing shall be deemed to have been received on the date of delivery to such officer or if delivered by e-mail or other means of prepaid, transmitted, recorded communication, on the first Business Day following the date of the sending of such notice by the Person giving such notice.

#### 13.2 Time of the Essence

Time shall be of the essence in this Indenture.

#### 13.3 Counterparts and Formal Date

This Indenture may be executed in several counterparts, each of which when so executed shall be deemed to be an original and such counterparts together shall constitute one and the same instrument and notwithstanding their date of execution shall be deemed to be dated as of the date hereof.

#### 13.4 Discretion of Directors

Any matter provided herein to be determined by the Directors shall be determined by the Directors in their sole discretion and any determination so made will be conclusive.

#### 13.5 Satisfaction and Discharge of Indenture

Upon the earlier of (a) the date by which there shall have been delivered to the Warrant Agent for exercise or cancellation of all Warrant Certificates theretofore certified hereunder or (b) the expiration of the Exercise Period, this Indenture, except to the extent that Common Shares and certificates therefor have not been issued and delivered hereunder or the Warrant Agent or the Company have not performed any of their obligations hereunder, shall cease to be of further effect and the Warrant Agent, on demand of and at the cost and expense of the Company and upon delivery to the Warrant Agent of a certificate of the Company stating that all conditions precedent to the satisfaction and discharge of this Indenture have been complied with and upon payment to the Warrant Agent of the fees and other remuneration payable to the Warrant Agent, shall execute proper instruments acknowledging satisfaction of and discharging of this Indenture.

#### 13.6 Provisions of Indenture and Warrant Certificates for the Sole Benefit of Parties and Warrantholders

Nothing in this Indenture or the Warrant Certificates, expressed or implied, shall give or be construed to give to any Person other than the parties hereto and the holders of the Warrant Certificates any legal or equitable right, remedy or claim under this Indenture, or under any covenant or provision herein contained, all such covenants and provisions being for the sole benefit of the parties hereto and the Warrantholders.

#### 13.7 Common Shares or Warrants Owned by the Company or its Subsidiaries Certificates to be Provided

For the purpose of disregarding any Warrants owned legally or beneficially by the Company or any Subsidiary of the Company or any other Affiliate of the Company in Section 9.16, the Company shall provide to the Warrant Agent, from time to time, a certificate of the Company setting forth as at the date of such certificate (a) the names (other than the name of the Company) of the registered holders of Common Shares which, to the knowledge of the Company, are owned by or held for the account of the Company or any Subsidiary of the Company or any other Affiliate of the Company; and (b) the number of Warrants owned legally and beneficially by the Company or any Subsidiary of the Company or any other Affiliate of the Company, and the Warrant Agent in making the determination in Section 9.16 shall be entitled to rely on such certificate.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF the parties hereto have executed this Indenture as of the date first written above.				
Т	TITAN MEDICAL INC.			
N	Sy:  Stephen Randall Chief Financial Officer			
C	COMPUTERSHARE TRUST COMPANY OF CANADA			
N	Sy:  Vame: Robert Morrison  Citle: Corporate Trust Officer			
N	By: Charles Cuschieri Citle: Associate Trust Officer			

## SCHEDULE "A" FORM OF WARRANT CERTIFICATE



# **Investor Presentation**

TSX: TMD | Nasdaq: TMDI

March 18, 2019

## Disclaimer

A final prospectus containing important information relating to the securities described in this document has been filed with the securities regulatory authorities in the provinces of British Columbia, Alberta and Ontario. A copy of the final prospectus, and any amendment, is required to be delivered with this document. This document does not provide full disclosure of all material facts relating to the securities offered. Investors should read the final prospectus and any amendment for disclosure of those facts, especially risk factors relating to the securities offered, before making an investment decision.

The Company has filed a registration statement with the United States Securities and Exchange Commission (the "SEC") for an offering of units. Before you invest, you should read the prospectus in that registration statement and other documents the issuer has filed and will file with the SEC for more complete information about the issuer and this offering. You may get these documents for free by visiting EDGAR on the SEC website at www.sec.gov. Alternatively, the issuer, any underwriter or any dealer participating in the offering will arrange to send you the prospectus, as supplemented, if you request it by contacting the Chief Financial Officer of the Company at 170 University Avenue, Suite 1000, Toronto, Ontario, MSH 3B3, Telephone: (416) 548-7522.

## **Forward-looking Statements**

This presentation contains "forward-looking information" and "forward-looking statements" which relate to future events or future performance and reflect the current expectations and assumptions of management of the Company's future growth, results of operations, performance and business prospects, opportunities, and illustrations and prototypes of the SPORT Surgical Systems. Wherever possible, words such as "may", "would", "could", "will", "anticipate", "believe", "plan", "expect", "intend", "estimate", "project", "predict", "target", "potential", and similar expressions have been used to identify these forward-looking statements. These statements reflect management's current beliefs with respect to future events and are based on information currently available to management. Forward-looking statements involve significant risks, uncertainties and assumptions. Many factors could cause the Company's actual results, performance, achievements or technological development and implementation to be materially different from any future results, performance, achievements or technological development and implementation that may be expressed or implied by such forward-looking statements, including, without limitation, those listed in the "Risk Factors" section of the Company's Annual Information Form in respect of the fiscal year ended December 31, 2017 and other information contained in the Company's public filings (which may be viewed at www.sedar.com). Information contained in this presentation is qualified in its entirety by such public filings. Should one or more of these risks or uncertainties materialize, or should assumptions underlying the forward looking statements prove incorrect, actual results, performance or achievements may vary materially from those expressed or implied by the forward-looking statements contained in this presentation. These factors should be considered carefully and prospective investors should not place undue reliance on the forward-looking statements. Although the forward-looking statements contained in the presentation are based upon what management currently believes to be reasonable assumptions as of the date of this presentation, the Company cannot assure prospective investors that actual results, performance or achievements will be consistent with these forward-looking statements. This presentation does not constitute an offer to sell any class of securities of the Company in any jurisdiction. There is no assurance as to the whether hospitals will purchase at assumed prices. The Company does not forecast what portion of the total addressable market it will be able to capture. On slide 6, the Company assumes that the information presented in Intuitive Surgical's news release is accurate, but has not independently verified the information.



## **Titan Medical Overview**

Designer and developer of the **SPORT Surgical System**, a versatile single-port platform that is intended to address a growing multibillion-dollar\* market for abdominal surgeries performed using robotic technology.

Designed for improved clinical performance, ease of use, operating room efficiency, and hospital economics. urgeries

Robotically Assisted Surgical (RAS) Devices market to grow at 11.7% CAGR for the next 5 years and reach \$5.3 billion in 2021, RAS Devices Market Report, Meddevicetracker Grou

# **Investment Highlights**

Novel Clinical Paradigm	✓ Multi-articulated triangulation through a single incision
Promising Physician Feedback	<ul> <li>✓ Tested by international surgeons from 4 surgical disciplines</li> <li>✓ 45 preclinical studies</li> <li>✓ 9 peer-reviewed abstract presentations and one published manuscript</li> </ul>
Robust IP Portfolio	√ 100+ global patents and applications
Disruptive Business Model	<ul> <li>✓ Projected savings on capital equipment, service and procedure costs</li> <li>✓ Compelling recurring revenue model</li> </ul>
Commercial Momentum	✓ U.S. launch planned in 2020 using direct sales strategy
Favorable Market Dynamics	<ul> <li>✓ Large, underpenetrated market</li> <li>✓ Applicable to multiple minimally invasive procedures</li> </ul>

## **Evolution of Surgical Care**

#### Open Surgery

- Open surgery offers broad application
- Requires significant hospital stay and recovery time
- Risk of adverse events

#### Minimally Invasive Surgery

- Minimally Invasive Surgery (MIS) has been a growing trend over the past 25 years
- Reduced hospitalization time
- Reduced risk of adverse events
- Requires highly skilled surgeons

#### Multi-Port Robotic Surgery

- Robotic surgery further expands upon the benefits of MIS
- Over 1 million\* global robotic procedures were performed in 2018
- Technology remains expensive with procedural and operational limitations

#### Single-Port Robotic Surgery

- Application of da Vinci® Single-Site in GYN and general surgery shows early promise
- da Vinci SP® single port robotic system received FDA clearance for urology in 2018
- Robotic visualization, precision and dexterity with triangulation delivered through a single incision – such as the SPORT System – the next frontier.



<sup>\*</sup> Press Release: Intuitive Surgical Announces Preliminary Fourth Quarter and Full Year 2018 Results, January 9, 2019

# Today's Robotic Surgery Environment

Robotic technology was introduced to mitigate the risks of MIS, reduce variations in procedural efficiency and improve consistency of patient outcomes.

#### **Benefits**

- + Increased Dexterity
- + Improved Visualization (3D)
- + Improved Ergonomics

The SPORT Surgical System offers the benefits of multi-articulated surgery through a single point of entry at a targeted lower cost.



## **Technology Differentiation**

Engineered for Simplicity and Efficiency



## Single-Incision

With a single incision made around the umbilicus, the result can be near-scarless surgery



# Small Footprint

Enhanced mobility and ease-of-use leads to quicker deployment in multiple ORs and higher utilization



#### Multi-Articulating

Single-use endeffectors on reusable multi-articulating instrument arms result in optimal and economical device performance in every procedure



## Open Display

3D high-definition display offers the perfect balance of surgical immersion and situational awareness in the OR



#### **Ergonomic** Workstation

Highly ergonomic workstation with natural handle interface enables comfortable surgical posture, even during long procedures



### Purposeful Design

Designed from the ground up to improve:

> Clinical Capabilities

OR Efficiency

Hospital Economics

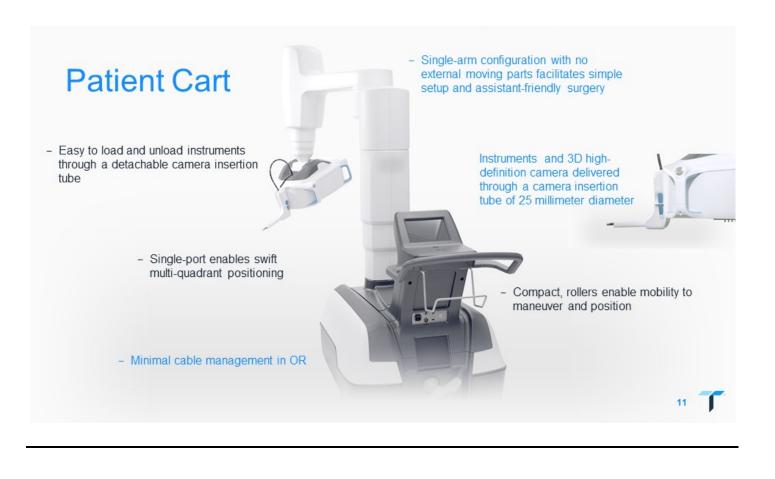


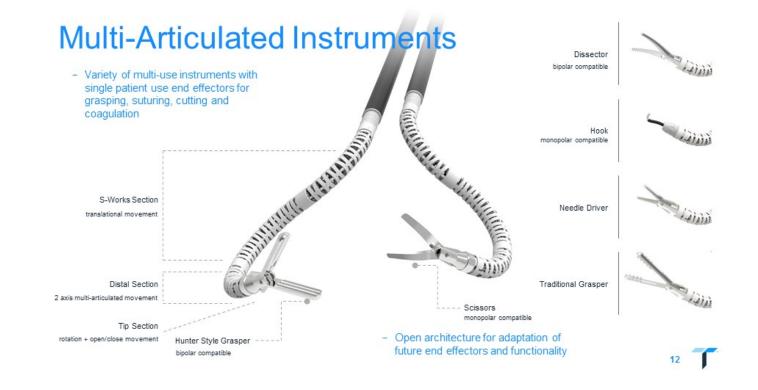
# **System Overview**

- Versatile single-port robotic surgery solution
- Smaller OR footprint than multiport systems
- Designed to overcome multi-port robotic surgery limitations
- Engineered for performance, efficiency and cost-effectiveness
- Expected to provide access to underserved market segments, such as ambulatory surgery centers









Single-Incision
Surgery + Enhanced
Robotic Technology

# Optimal Patient Care



SPORT Surgical System is designed to provide surgeons with multi-articulated instruments in a triangulated configuration through single-port access to the body.



# Intellectual Property

The SPORT Surgical System is a unique single-incision robotic system that is differentiated by its patented multi-articulating instruments, user interface and ergonomic features.

Differentiated and innovative design provides a strong position on freedom to operate.

30 U.S. & International Patents Issued77 Applications Pending

#### Areas of the SPORT Surgical System covered by patents or pending applications:









## Proven Feasibility in Wide Variety of Procedures

45 Procedures Performed to Date (live porcine unless otherwise indicated)

- GYN and GYN-ONC (8 procedures at Columbia University and Florida Hospital):
  - Radical Hysterectomy with Bilateral Salpingo Oophorectomy and Bilateral Pelvic / Para-Aortic Node Dissection
  - · Simple Hysterectomy with Bilateral Salpingo Oophorectomy and Bilateral Pelvic Node Dissection
  - Simple Hysterectomy with Bilateral Salpingo Oophorectomy
- Urology (19 procedures at IHU Strasbourg and Florida Hospital):
  - Hemi-Nephrectomy and Partial Nephrectomy
  - Prostatectomy (Human Cadaver)
  - Pveloplastv
  - Ureteral-Bladder Anastomosis
- General Surgery (14 procedures at IHU Strasbourg and Florida Hospital):
  - Cholecystectomy (1 Human Cadaver, 5 Live Porcine)
  - Nissen Fundoplication (1 Human Cadaver, 3 Live Porcine)
  - Esophagectomy (Human Cadaver)
  - Gastrectomy
  - Splenectomy
- Colorectal (4 procedures at Florida Hospital):
  - Colectomy
  - Low Anterior Resection

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## Peer-reviewed Abstracts to Date

Multi-disciplinary applications of a new robotic platform by Barbara Seeliger, MD and Lee Swanstrom, MD (IHU Strasbourg) Accepted and presented at Society of American Gastrointestinal and Endoscopic Surgeons Meeting, Seattle, WA, April 2018

Single-portprostatectomy using SPORT Surgical System by Eric Barret, MD (IMM, France)

Accepted and presented at EAU Section of Urology Technology Meeting, Modena, Italy, May 2018

Multispecialty single portrobotic technology applied in the live animal model: proof of concept by Travis Rogers, MD, Eduardo Parra Davila, MD, Vipul Patel, MD (all from Florida Hospital), Ricardo Estape, MD (South Miami GOG) and Armando Melani, MD (IRCAD Brazil)

Accepted and presented as a poster at Society of Robotic Surgery Meeting, Stockholm, Sweden, June 2018

- Feasibility of single-port partial nephrectomy using SPORT surgical systemby Eric Barret, MD (IMM, France)
  - Accepted and presented as a poster at Society of Robotic Surgery Meeting, Stockholm, Sweden, June 2018
- Single-port robotic partial and hemi nephrectomy using a novel single port robotic platform by Sebastien Crouzet, MD (University of Lyon, France) and Barbara Seeliger, MD

Accepted and presented at EAU Robotic Urology Section Meeting, Marseille, France, September 2018

- Reverse Objective Structured Assessment of Technical Skills (Reverse-OSATS) as a means of measuring the capability of the Titan Medical SPORT Surgical System on core surgical principles by Chetna Arora, MD, Arnold P. Advincula, MD (both from Columbia University Medical Center) and William B. Burke, MD (Stony Brook Cancer Center) Accepted and presented at Society of European Robotic Gynecologic Surgeons Meeting, Milan, Italy, September 2018
- Multispecialty single port robotic technology applied in the live animal model: proof of concept by Travis Rogers, MD, Eduardo Parra Davila, MD, Vipul Patel, MD (all from Florida Hospital), Ricardo Estape, MD (South Miami GOG) and Armando Melani, MD (IRCAD Brazil)

Accepted and presented at World Congress of Endourology Meeting, Paris, France, September 2018

Feasibility of single-port partial nephrectomy using SPORT surgical systemby Eric Barret, MD (IMM, France)

Accepted and presented at World Congress of Endourology Meeting, Paris, France, September 2018

 $Reverse Objective Structured Assessment of Technical Skills (Reverse-OSATS) \ as a means of measuring the capability of the Titan Medical SPORT Surgical System on the Company of the Co$ core surgical principles by Chetna Arora, MD, Arnold P. Advincula, MD (both from Columbia University Medical Center) and William B. Burke, MD (Stony Brook Cancer Center) Accepted and presented at American Association of Gynecologic Laparoscopists Global Congress, Las Vegas, NV, November 2018

SPORT single-port

robotic surgery is

feasible &

repeatable.

## **Published Manuscript**

## Surgical Endoscopy Enabling single-site laparoscopy: the SPORT platform

Barbara Seeliger<sup>1</sup> · Michele Diana<sup>1</sup> · Jelle P. Ruurda<sup>2</sup> · Konstantinos M. Konstantinidis<sup>3</sup> · Jacques Marescaux<sup>1</sup> · Lee L. Swanström<sup>1,4</sup>

- 1 IHU-Strasbourg Institute of Image-Guided Surgery, 1, place de l'Hôpital, 67091 Strasbourg Cedex, France
- 2 Department of Surgical Oncology, University Medical Center, Utrecht, Utrecht, Netherlands 3 Department of General, Bariatric, Laparoscopic and Robotic Surgery, Athens Medical Center, Athens, Greece 4 Division of GI/MIS, The Oregon Clinic, Portland, OR, USA



# **Commercial Timeline**

	2018	2019	2020
Established US & EU Centers of Excellence	✓		
Proven Feasibility	✓		
Integrated Simulation Training	✓		
Engineering Confidence Build	✓		
Design Freeze		H1	
GLP Animal Studies		H1	
IDE Approval		H2	
Submit 510(K) Application		H2	
Submit Technical File for CE Mark		H2	
Anticipated Regulatory Clearance			•
Projected Initial Launch			•

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# Summary

- Targeting growing multibillion-dollar global robotic surgery market
- Highly versatile, differentiated advanced single-port platform
- Designed for improved clinical performance, ease of use, operating room efficiency and hospital economics
- Potential benefits to patients, surgeons and hospitals versus competitive offerings
- System performance verified in preclinical studies with data presented at clinical conferences
- Attractive capital and recurring revenue streams expected
- Experienced management team with record of success





TSX: TMD | Nasdag: TMDI



Tel: 416 865 0200 Fax: 416 865 0887 www.bdo.ca BDO Canada LLP 222 Bay Street Suite 2200, PO Box 131 Toronto ON M5K 1H1 Canada

Consent of Independent Registered Public Accounting Firm

Titan Medical Inc. Toronto, Canada

We hereby consent to the incorporation by reference in this Registration Statement on Form F-10 (Amendment No. 1) (the "F-10/A") of (i) our report dated February 13, 2019, on the financial statements of Titan Medical Inc. (the "Company") for the year ended December 31, 2018; and (ii) our report dated February 13, 2018, on the financial statements of the Company for the year ended December 31, 2017, both appearing in the Company's current report on Form 6-K filed on February 15, 2019.

We also consent to the reference to us under the heading "Experts" in the prospectus contained in the F-10/A.

BDO Canada LLP
BDO Canada LLP
Toronto, Canada

March 18, 2019

March 18, 2019

The Securities and Exchange Commission

Re: F-10 Registration Statement of Titan Medical Inc. (the "Corporation")

Dear Sirs/Mesdames:

We hereby consent to references to our firm name under the headings "Enforceability of Civil Liabilities", "Eligibility for Investment", "Certain Canadian Federal Income Tax Considerations" and "Legal Matters" in the prospectus of the Corporation that forms a part of this registration statement on Form F-10 filed by the Corporation under the Securities Act of 1933, as amended (the "Act") and to the reference to our advice under the heading "Enforceability of Civil Liabilities" and to our opinions under the headings "Eligibility for Investment" and "Certain Canadian Federal Income Tax Considerations". In giving this consent, we do not thereby admit that we come within the category of persons whose consent is required by the Act or the rules thereunder.

Yours truly,

Part of the Colors of LLB



Baker & McKenzie LLP Barristers & Solicitors

Brookfield Place Bay/Wellington Tower 181 Bay Street, Suite 2100 Toronto, ON M5J 2T3 Canada

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Asia Pacific

Bangkok Bangkok Beijing Brisbane Hanol Ho Chi Minh City Hong Kong Jakarta Kuala Lumpur Marilaz Kuala Lumpur Marilaz Sacul Singapore Sydney Taipel Tokyo Yangon March 18, 2019

The Securities and Exchange Commission

Re: Titan Medical Inc. (the "Corporation") - F-10 Registration Statement

Dear Sirs/Mesdames:

We refer to the short form prospectus dated March 18, 2019 of the Corporation in relation to the offering of units of the Corporation (the "Prospectus").

We hereby consent to the references to our firm name on the cover page and under the headings "Legal Matters" and "Documents Filed as Part of the Registration Statement" in the Prospectus that forms a part of this registration statement on Form F-10 filed by the Corporation under the Securities Act of 1933, as amended (the "Act") and to the reference to our firm name and to the use of our opinions under the headings "Eligibility for Investment" and "Certain Canadian Federal Income Tax Considerations".

In giving this consent, we do not thereby admit that we come within the category of persons whose consent is required by the Act or the rules thereunder.

Yours very truly,

Eden Yh Kengie up

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& Africa
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Abu Dhabi
Almaty
Amsterdam
Antwerp
Bahrain
Baku
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Berlin
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Associated Firm
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 Trench, Rossi e Watanabe
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