

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Titan Medical Inc.

(Exact name of registrant as specified in its charter)

Ontario, Canada

(Province or other jurisdiction of
incorporation or organization)

98-0663504

(I.R.S. Employer Identification No.)

**170 University Avenue, Suite 1000
Toronto, Ontario M5H 3B3
Canada**

(Address of principal executive offices)

Titan Medical Inc. Stock Option Plan
(Full title of plan)

**CT Corporation System
1015 15th Street N.W., Suite 1000
Washington, DC 20005**
(Name and address of agent for service)

(202) 572-3100

(Telephone number, including area code, of agent for service)

Copies to:

Richard Raymer
James Guttman
Dorsey & Whitney LLP
TD Canada Trust Tower
Brookfield Place, 161 Bay Street, Suite 4310
Toronto, Ontario M5J 2S1
Canada
Tel: (416) 367-7376

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Share ⁽²⁾	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee ⁽²⁾
Common shares issuable under the Stock Option Plan	2,211,494 ⁽¹⁾	\$7.48	\$16,541,975	\$2,004.89
TOTAL	2,211,494	[-]	\$16,541,975	\$2,004.89

- (1) Represents the maximum number of common shares (the “Common Shares”) of Titan Medical Inc. (the “Registrant”) issuable upon exercise of options under the Titan Medical Inc. Stock Option Plan, as amended and restated on March 14, 2018 (the “Amended and Restated Plan”).
- (2) The proposed maximum offering price per share and the registration fee were calculated in accordance with Rule 457(c) and (h) based on the average high and low prices for the Common Shares on February 8, 2019, as quoted on the NASDAQ Capital Market.

EXPLANATORY NOTE

This Registration Statement on Form S-8 is being filed for the purpose of registering common shares (the “Common Shares”) of Titan Medical Inc. (the “Registrant” or “Company”) issuable pursuant to the exercise of options under the Amended and Restated Plan.

On June 14, 2018, the Registrant’s shareholders authorized, among other things, the adoption of the Amended and Restated Plan.

This Registration Statement on Form S-8 registers 2,211,494 Common Shares issuable upon the exercise of options under the Amended and Restated Plan.

PART I
INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Item 1. Plan Information

Information required by Part I to be contained in the Section 10(a) prospectus is omitted from the Registration Statement in accordance with Rule 428 under the Act and Note 1 to Part I of Form S-8.

Item 2. Registrant Information and Employee Plan Annual Information

Information required by Part I to be contained in the Section 10(a) prospectus is omitted from the Registration Statement in accordance with Rule 428 under the Act and Note 1 to Part I of Form S-8.

PART II
INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation Of Documents By Reference.

The following documents which have been and will in the future be filed by the Registrant with the United States Securities and Exchange Commission (the "SEC") are incorporated into this Registration Statement by reference:

- (a) Our Registration Statement on Form 40-F, as filed with the SEC on June 11, 2018;
- (b) All other reports filed by the Registrant under Section 13(a) or 15(d) of the Securities Exchange Act of 1934 since December 31, 2017.
- (c) The description of the Common Shares contained in our Registration Statement on Form 40-F, as filed with the SEC on June 11, 2018, including any amendment or report filed for the purpose of amending such description.

In addition, all reports and documents filed by us under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 after the date of this Registration Statement and prior to the filing of a post-effective amendment which indicates that all securities being offered have been sold or which deregisters all securities then remaining unsold, and any Form 6-K furnished by us during such period or portions thereof that are identified in such Form 6-K as being incorporated by reference into this Registration Statement, shall be deemed to be incorporated by reference in and to be part of this Registration Statement from the date of filing of each such document.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

None.

Item 6. Indemnification of Directors and Officers.

Under the Business Corporation Act (Ontario) (the “**OBCA**”), the Registrant may indemnify a director or officer, a former director or officer 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, 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 condition that (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 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) in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, the individual had reasonable grounds for believing that his conduct was lawful. Further, the Registrant may, with court approval, indemnify a person described above 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, against all costs, charges and expenses reasonably incurred by the individual in connection with such action if the individual fulfills condition (i) above. Additionally, the Registrant may advance money to a director, officer or other individual for the costs, charges, and expenses of a proceeding referred to above, with the necessary court approval where noted, but the individual is required to repay the money to the Registrant if the individual does not satisfy condition (i) above. An individual described above is also entitled to indemnification as described above from the Registrant as a matter of right if the individual was not judged by a court or other competent authority to have committed any fault or omitted to do anything the individual ought to have done, and he fulfills conditions (i) and (ii) above. The Registrant has entered into an Indemnity Agreement with each of its directors and officers under which the Registrant has agreed to indemnify the individual in substantially the same circumstances as outlined in this paragraph.

In accordance with the OBCA, the by-laws of the Registrant provide that the Registrant shall indemnify a director or officer, a former director or officer, or an 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, provided that (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.

A policy of directors' and officers' liability insurance is maintained by the Registrant, at its expense, 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.

Insofar as indemnification for liabilities arising under the U.S. Securities Act 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 Commission such indemnification is against public policy as expressed in the U.S. Securities Act and is therefore unenforceable.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

<u>Number</u>	<u>Exhibit</u>
4.1	Titan Medical Inc. Stock Option Plan
5.1	Opinion of Borden Ladner Gervais
23.1	Consent of Borden Ladner Gervais (Included in Exhibit 5.1)
23.2	Consent of BDO Canada
24.1	Power of Attorney (See Signature Pages)

Item 9. Undertakings.

(a) The Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective amendment hereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement;

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference into this Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in such Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Toronto, Country of Canada on February 11, 2019.

TITAN MEDICAL INC.

/s/ Stephen Randall

Name: Stephen Randall

Title: Chief Financial Officer
(Principal Financial Officer)

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Stephen Randall and David McNally as his attorney-in-fact, with the power of substitution, for them in any and all capacities, to sign any amendments to this registration statement, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that said attorneys-in-fact, or their substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the date indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ David McNally</u> David McNally	President, Chief Executive Officer (Principal Executive Officer) and Director	February 11, 2019
<u>/s/ Stephen Randall</u> Stephen Randall	Chief Financial Officer (Principal Financial Officer) and Director	February 11, 2019
<u>/s/ John E. Barker</u> John E. Barker	Director and Chairman	February 11, 2019
<u>/s/ John E. Schellhorn</u> John E. Schellhorn	Director	February 11, 2019
<u>/s/ Bruce G. Wolff</u> Bruce G. Wolff	Director	February 11, 2019
<u>/s/ Domenic Serafino</u> Domenic Serafino	Director	February 11, 2019

AUTHORIZED REPRESENTATIVE IN THE UNITED STATES

/s/ David McNally
David McNally

Authorized Representative
in the United States

February 11, 2019

EXHIBIT INDEX

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TITAN MEDICAL INC.

STOCK OPTION PLAN

(Amended and Restated effective as of March 14, 2018)

1. The Plan and Definitions

A stock option plan (this “**Plan**”), pursuant to which options to purchase common shares in the capital of Titan Medical Inc. (the “**Corporation**”) may be granted to the directors, officers and employees of the Corporation and to Service Providers retained by the Corporation, is hereby established on the terms and conditions set forth herein.

The trading price of the Common Shares may vary from time to time and the advantage conferred by the granting of an Option may not be guaranteed. Accordingly, each person who has been granted an Option must decide, in accordance with his own estimate and financial situation, if it is appropriate to exercise any Option granted under this Plan. The decision to exercise or to not exercise an Option shall not affect in any way the status of the option holder within the Corporation or its subsidiaries.

The following capitalized terms used herein shall have the meanings ascribed thereto as follows:

- (i) “**Black Out Period**” means the period during which the Corporation has imposed trading restrictions on its insiders and certain other persons pursuant to its insider trading and disclosure policies;
- (ii) “**Board**” means the Board of Directors of the Corporation;
- (iii) “**control**” and “**controlled**” shall have the meanings ascribed thereto in the *Securities Act* (Ontario);
- (iv) “**Common Shares**” means the common shares in the capital of the Corporation;
- (v) “**Disability**” means any disability with respect to a Participant which the Board, in its sole and unfettered discretion, considers likely to prevent permanently the Participant from:
 - (a) being employed or engaged by the Corporation, its subsidiaries or another employer, in a position the same as or similar to that in which he was last employed or engaged by the Corporation or its subsidiaries; or
 - (b) acting as a director or officer of the Corporation or its subsidiaries;
- (vi) “**Eligible Assignee**” means, in respect of a Participant, that person’s spouse, minor children or minor grandchildren, Eligible Retirement Plan, Eligible Corporation or Eligible Family Trust;
- (vii) “**Eligible Corporation**” means, in respect of a Participant, a corporation controlled by that person and all the shares of which are held by that person and/or Eligible Assignees of that person;
- (viii) “**Eligible Family Trust**” means, in respect of a Participant, a trust of which the Eligible Person is a trustee and of which all beneficiaries are that person and/or Eligible Assignees;
- (ix) “**Eligible Retirement Plan**” means, in respect of a Participant in Canada, a registered retirement savings plan or registered retirement income fund established by that person or under which the beneficiary or annuitant is that person, and in respect of a Participant in the United States, a 401(k) plan or individual retirement account established by that person or under which the beneficiary or annuitant is that person;

- (x) “**Exchange**” means the Toronto Stock Exchange and/or such other stock exchange upon which the Common Shares may become listed;
- (xi) “**Insider**” means a “reporting insider” (as such term is defined in National Instrument 55-104 – *Insider Reporting Requirements and Exemptions*) and “associates” and “affiliates” thereof (as such terms are defined in the rules of the Exchange or where they are not so defined, as such terms are defined in the *Securities Act* (Ontario));
- (xii) “**Insider Participation Limit**” means the number of Common Shares:
 - (a) issued to Insiders, within any one year period, and
 - (b) issuable to Insiders, at any time,under this Plan, and when combined with all of the Corporation’s other security based compensation arrangements (if any), do not exceed 10% of the Corporation’s total issued and outstanding Common Shares.
- (xiii) “**Option Period**” shall mean the period during which an Option may be exercised;
- (xiv) “**Options**” shall mean options to purchase Common Shares granted under this Plan;
- (xv) “**Participant**” shall have the meaning ascribed to in Section 1(a)6(a);
- (xvi) “**Service Providers**” persons or companies engaged by the Corporation to provide services on a continuous basis for an initial, renewable or extended period of twelve months or more; and
- (xvii) “**VWAP**” means the volume weighted average trading price of the Common Shares on the Exchange, calculated by dividing the total value by the total volume of Common Shares traded for the relevant period.

2. Purpose

The purpose of this Plan is to advance the interests of the Corporation by encouraging the directors, officers and employees of the Corporation and Service Providers retained by the Corporation to acquire Shares, thereby: (i) increasing the proprietary interests of such persons in the Corporation; (ii) aligning the interests of such persons with the interests of the Corporation’s shareholders generally; (iii) encouraging such persons to remain associated with the Corporation and (iv) furnishing such persons with an additional incentive in their efforts on behalf of the Corporation.

3. Administration

- (a) This Plan shall be administered by the Board.
- (b) Subject to the terms and conditions set forth herein, the Board is authorized to provide for the granting, exercise and method of exercise of Options, all on such terms (which may vary between Options granted from time to time) as it shall determine. In addition, the Board shall have the authority to: (i) construe and interpret this Plan and all option agreements entered into hereunder; (ii) prescribe, amend and rescind rules and regulations relating to this Plan and (iii) make all other determinations necessary or advisable for the administration of this Plan. All determinations and interpretations made by the Board shall be binding on all Participants (as hereinafter defined) and on their legal, personal representatives and beneficiaries and permitted assignees hereunder.

- (c) The Board's authority to make amendments to this Plan without shareholder approval shall be in accordance with paragraph 18 below.
- (d) Notwithstanding the foregoing or any other provision contained herein, the Board shall have the right to delegate the administration and operation of this Plan, in whole or in part, to a committee of the Board or to the Chief Executive Officer or any other officer of the Corporation. Whenever used herein, the term "Board" shall be deemed to include any committee or officer to which the Board has, fully or partially, delegated responsibility and/or authority relating to the Plan or the administration and operation of this Plan pursuant to this Section 3.
- (e) Options shall be evidenced by (i) an agreement, signed on behalf of the Corporation and by the person to whom an Option is granted, which agreement shall be in such form as the Board shall approve, or (ii) a written notice or other instrument, signed by the Corporation, setting forth the material attributes of the Options.
- (f) The Board shall not grant Options to residents of the United States unless such Options are registered under the United States Securities Act of 1933, *as amended*, (the "**U.S. Securities Act**") or are issued in compliance with an available exemption from the registration requirements of the U.S. Securities Act.

4. Shares Subject to Plan

- (a) Subject to Section 15 below, the securities that may be acquired by Participants upon the exercise of Options shall be deemed to be fully authorized and issued Common Shares. Whenever used herein, the term "Common Shares" shall be deemed to include any other securities that may be acquired by a Participant upon the exercise of an Option the terms of which have been modified in accordance with Section 15 below.
- (b) The aggregate number of Common Shares reserved for issuance under this Plan, or any other plan of the Corporation, shall not, at the time of the stock option grant, exceed ten percent (10%) of the total number of issued and outstanding Common Shares (calculated on a non-diluted basis) unless the Corporation receives the permission of the stock exchange or exchanges on which the Shares are then listed to exceed such limit.
- (c) If any Option granted under this Plan shall expire or terminate for any reason without having been exercised in full, any un-purchased Common Shares to which such Option relates shall be available for the purposes of the granting of Options under this Plan.

5. Maintenance of Sufficient Capital

The Corporation shall at all times during the term of this Plan ensure that the number of Common Shares it is authorized to issue shall be sufficient to satisfy the Corporation's obligations under all outstanding Options granted pursuant to this Plan.

6. Eligibility and Participation

(a) The Board may, in its discretion, select any of the following persons to participate in this Plan and to receive Options under this Plan:

- (i) directors of the Corporation;
- (ii) officers of the Corporation;
- (iii) employees of the Corporation; and
- (iv) Service Providers;

(any such person having been selected for participation in this Plan by the Board is herein referred to as a “Participant”).

(b) The Board may from time to time, in its discretion, grant an Option to any Participant, upon such terms, conditions and limitations as the Board may determine, including the terms, conditions and limitations set forth herein, provided that Options granted to any Participant shall be approved by the shareholders of the Corporation if the rules of any stock exchange on which the Shares are listed require such approval.

7. Exercise Price

The Board shall, at the time an Option is granted under this Plan, fix the exercise price at which Common Shares may be acquired upon the exercise of such Option provided that such exercise price may not be lower than the VWAP of the Common Shares on the Exchange over the period of five days immediately preceding the date of the grant. In addition, the exercise price of an Option must be paid in cash. Disinterested shareholder approval shall be obtained by the Corporation prior to any reduction to the exercise price if the affected Participant is an Insider.

8. Number of Optioned Shares

The number of Common Shares that may be acquired under an Option granted to a Participant shall be determined by the Board as at the time the Option is granted, provided that the aggregate number of Shares reserved for issuance to any one Participant under this Plan or any other plan of the Corporation, shall not exceed five percent (5%) of the total number of issued and outstanding Common Shares (calculated on a non-diluted basis) in any 12-month period.

This Plan limits the number of Options which may be granted to Insiders to the Insider Participation Limit except in circumstances where the Corporation has obtained disinterested shareholder approval for grants of Options to Participants who are Insiders where any such grant or grants would result in the Insider Participation Limited being exceeded.

9. Term

The Option Period shall be determined by the Board at the time that the Option is granted, subject to any vesting limitations which may be imposed by the Board in its sole and unfettered discretion at the time that such Option is granted and Sections 11, 12 and 16 below, provided that:

- (a) no Option shall be exercisable for a period exceeding ten (10) years from the date that the Option is granted unless the Corporation receives the required approval of the stock exchange or exchanges on which the Common Shares are then listed and as specifically provided by the Board and as permitted under the rules of any stock exchange or exchanges on which the Shares are then listed;

- (b) no Option in respect of which shareholder approval is required under the rules of any stock exchange or exchanges on which the Common Shares are then listed shall be exercisable until such time as the Option has been approved by the shareholders of the Corporation;
- (c) the Board may, subject to the receipt of any necessary regulatory approvals, in its sole discretion, accelerate the time at which any Option may be exercised, in whole or in part; and
- (d) notwithstanding the expiration date applicable to any Option, if an Option would otherwise expire during a Black Out Period or during the period of ten business days immediately following the last day of a Black Out Period, the expiration date of such Option shall be the tenth business day following the expiration of the Black Out Period, provided that in no event shall the period during which said Option is exercisable be extended beyond 10 years from the date such Option is granted to the Participant.

10. Method of Exercise of Option

- (a) Except as set forth in Sections 11 and 12 below or as otherwise determined by the Board, no Option may be exercised unless the holder of such Option is, at the time the Option is exercised, a director, officer, employee or Service Provider of the Corporation or an Eligible Assignee.
- (b) Options that are otherwise exercisable in accordance with the terms thereof may be exercised in whole or in part from time to time.
- (c) Any Participant (or his legal, personal representative) or Eligible Assignee wishing to exercise an Option shall deliver to the Corporation, at its principal office in the City of Toronto, Ontario:
 - (i) a written notice expressing the intention of such Participant (or his legal, personal representative) or Eligible Assignee to exercise the Option and specifying the number of Common Shares in respect of which the Option is exercised; and
 - (ii) a cash payment, certified cheque or bank draft, representing the full purchase price of the Common Shares in respect of which the Option is exercised.
- (d) Upon the exercise of an Option as aforesaid, the Corporation shall use reasonable efforts to forthwith deliver, or cause the registrar and transfer agent of the Common Shares to deliver, to the relevant Participant (or his legal, personal representative) or to the order thereof, a certificate representing the aggregate number of fully paid and non-assessable Common Shares in respect of which the Option has been duly exercised.
- (e) No Option holder who is resident in the United States may exercise Options unless the Common Shares to be issued upon exercise are registered under the U.S. Securities Act or are issued in compliance with an available exemption from the registration requirements of the U.S. Securities Act.
- (f) The Corporation shall be entitled to take all steps necessary to ensure that sufficient funds are provided to the Corporation by the Participant or Eligible Assignee to enable the Corporation to satisfy all withholding tax and other source deduction requirements in respect of the exercise of an Option by the Participant or Eligible Assignee that are imposed by any applicable law, including:
 - (i) deducting and withholding any amount from any payments made to the Participant or Eligible Assignee, whether hereunder or otherwise;

- (ii) requiring from the Participant or Eligible Assignee a cash payment, certified cheque or bank draft in the amount specified by the Corporation; and
- (iii) requiring that the Participant or Eligible Assignee enter into a same-day sale in respect of some or all of the Common Shares received on the exercise of an Option, with a portion of the sale proceeds being remitted directly to the Corporation.

11. Ceasing to be a Director, Officer, Employee or Service Provider

Unless the Board otherwise determines:

- (a) if a Participant is dismissed for cause as a director, officer or employee of, or Service Provider to, the Corporation or one of its subsidiaries, all unexercised Option rights of that Participant or such Participant's Eligible Assignee (where the Participant has assigned the Option to such Eligible Assignee) under this Plan shall immediately become terminated and shall lapse notwithstanding the original term of the Option granted to such Participant under this Plan; and
- (b) if any Participant shall cease to hold the position or positions of director, officer, employee or Service Provider of the Corporation (as the case may be) as a result of (i) retirement at the normal retirement age prescribed by the Corporation, if any; (ii) resignation; or (iii) termination other than for cause; such Participant or such Participant's Eligible Assignee (where the Participant has assigned the Option to such Eligible Assignee) shall have the right for a period to be determined by the Board not exceeding 90 days, or such longer period determined by the Board at its discretion in respect of a specific Option on a date after such Option is granted notwithstanding an earlier determination by the Board, from the date of the Participant ceasing to be a director, officer, employee or Service Provider to exercise his Options under this Plan with respect to all Common Shares issuable thereunder to the extent that the Options were exercisable on the date of such Participant ceasing to hold any such position with the Corporation, or until the normal expiry date of the Option, whichever is earlier. Upon the expiration of such period, all unexercised Option rights of that Participant and any Eligible Assignee thereof under this Plan shall immediately become terminated and shall lapse notwithstanding the original term of the Option granted to such Participant under this Plan.

For greater certainty, the termination of any Options held by the Participant or his Eligible Assignee, and the period during which the Participant or his Eligible Assignee may exercise any Options, shall be without regard to any notice period arising from the Participant's ceasing to hold the position or positions of director, officer, employee or Service Provider of the Corporation (as the case may be).

Neither the selection of any person as a Participant nor the granting of an Option to any Participant under this Plan shall: (i) confer upon such Participant any right to continue as a director, officer, employee or Service Provider of the Corporation, as the case may be; or (ii) be construed as a guarantee that the Participant will continue as a director, officer, employee or Service Provider of the Corporation, as the case may be.

12. Death or Disability of a Participant

In the event of the death of a Participant, any Option previously granted to him shall be exercisable until the end of the Option Period or until the expiration of 12 months after the date of death of such Participant, whichever is earlier, and then only:

- (a) by the person or persons to whom the Participant's rights under the Option shall pass by the Participant's will or applicable law; and
- (b) to the extent that he was entitled to exercise the Option as at the date of his death.

Notwithstanding Section 11, in the event of the Disability of a Participant, any Option previously granted to him shall be exercisable until the end of the Option Period or until the expiration of 12 months after the determination by the Board of the Disability, whichever is earlier.

13. Rights of Participants

No person entitled to exercise any Option granted under this Plan shall have any of the rights or privileges of a shareholder of the Corporation in respect of any Common Shares issuable upon exercise of such Option until such Common Shares have been paid for in full and issued to such person.

14. Proceeds from Exercise of Options

The proceeds from any issuance of Common Shares upon the exercise of Options shall be added to the general funds of the Corporation and shall thereafter be used from time to time for such corporate purposes as the Board may determine and direct.

15. Adjustments

- (a) The number of Common Shares subject to the Plan shall be increased or decreased proportionately in the event of the subdivision or consolidation of the outstanding Common Shares of the Corporation, and in any such event a corresponding adjustment shall be made to the number of Common Shares deliverable upon the exercise of any Option granted prior to such event without any change in the total price applicable to the unexercised portion of the Option, but with a corresponding adjustment in the price for each Common Share that may be acquired upon the exercise of the Option. In case the Corporation is reorganized or merged or consolidated or amalgamated with another corporation, appropriate provisions shall be made for the continuance of the Options outstanding under this Plan and to prevent any dilution or enlargement of the same.
- (b) Adjustments under this Section 15 shall be made by the Board, whose determination as to what adjustments shall be made, and the extent thereof, shall be final, binding and conclusive. No fractional Common Shares shall be issued upon the exercise of an Option following the making of any such adjustment.

16. Change of Control

Notwithstanding any vesting restrictions otherwise applicable to the relevant Options, in the event of a sale by the Corporation of all or substantially all of its assets or in the event of a change of control of the Corporation, each Participant or his Eligible Assignee shall be entitled to exercise, in whole or in part, the Options granted to such Participant hereunder, either during the term of the Option or within 90 days after the date of the sale or change of control, whichever first occurs.

For the purpose of this Plan, "change of control of the Corporation" means and shall be deemed to have occurred upon:

- (a) the acceptance by the holders of Common Shares of the Corporation, representing in the aggregate, more than 50 percent (50%) of all issued Common Shares of the Corporation, of any offer, whether by way of a takeover bid or otherwise, for all or any of the outstanding Common Shares of the Corporation; or

- (b) the acquisition, by whatever means, by a person (or two or more persons who, in such acquisition, have acted jointly or in concert or intend to exercise jointly or in concert any voting rights attaching to the Common Shares acquired), directly or indirectly, of beneficial ownership of such number of Common Shares or rights to Common Shares of the Corporation, which together with such person's then owned Common Shares and rights to Common Shares, if any, represent (assuming the full exercise of such rights to voting securities) more than fifty percent (50%) of the combined voting rights of the Corporation's then outstanding Common Shares; or
- (c) the entering into of any agreement by the Corporation to merge, consolidate, amalgamate, initiate an arrangement or be absorbed by or into another corporation; or
- (d) the passing of a resolution by the Board or shareholders of the Corporation to substantially liquidate the assets or wind-up the Corporation's business or significantly rearrange its affairs in one or more transactions or series of transactions or the commencement of proceedings for such a liquidation, winding-up or re-arrangement (except where such re-arrangement is part of a bona fide reorganization of the Corporation in circumstances where the business of the Corporation is continued and where the shareholdings remain substantially the same following the re-arrangement); or
- (e) individuals who were members of the Board immediately prior to a meeting of the shareholders of the Corporation involving a contest for or an item of business relating to the election of directors, not constituting a majority of the Board following such election.

17. Transferability

- (a) Subject to sub-section 17(b), all Options and all benefits, interests and rights accruing to any Participant (or such Participant's Eligible Assignee) in accordance with the terms and conditions of this Plan may only be exercised by the Participant (or such Participant's Eligible Assignee) during the lifetime of a Participant and shall be non-transferrable and non-assignable and may not be made subject to execution, attachment or similar process, save and except with the prior written permission of the Board, or in the event of the death of a Participant, by the person or persons to whom the Participant's rights under the Option pass by the Participant's will or applicable laws of descent and distribution.
- (b) Notwithstanding section 17(a) but subject to obtaining any necessary approvals in advance from the Corporation and from each Exchange on which the Common Shares are listed and which reserves the right to approve such assignments, a Participant may assign Options granted to him under the Plan to Eligible Assignees and Eligible Assignees may, in turn, assign such Options to the original Participant or to other Eligible Assignees of the original Participant. Notwithstanding any such assignment, (i) all Options granted under the Plan shall be deemed to be the Option of the original Participant for the purposes of applying the rules and policies of the Exchange on which the Common Shares are listed and (ii) the Corporation shall continue to treat the original Participant as the holder of the assigned Options unless and until such time as the Corporation is provided with notice in writing from the original Participant or its legal representative and the Eligible Assignee, together with such other documentation as the Corporation may require, confirming that the assignee is an Eligible Assignee.

18. Amendment and Termination of Plan

The Board may also, at any time, amend or revise the terms of this Plan, subject to the receipt of all necessary shareholder, Exchange and regulatory approvals, and any such amendment or revision shall apply to any Options theretofore granted under this Plan.

The Board has the discretion to make amendments to this Plan which it may deem necessary, without having to obtain shareholder approval including, without limitation:

- (a) minor changes of a “housekeeping nature”;
- (b) amending Options under this Plan, including with respect to the Option Period (provided that the period during which an Option is exercisable does not exceed 10 years from the date the Option is granted and that such Option is not held by an Insider), vesting period, exercise method and frequency, subscription price (provided that such Option is not held by an Insider) and method of determining the subscription price, assignability and effect of termination of a Participant’s employment or cessation of the Participant’s directorship;
- (c) changing the class of Participants eligible to participate under this Plan;
- (d) accelerating the vesting of any Option;
- (e) extending the expiration date of any Option provided that the period during which an option is exercisable does not exceed 10 years from the date the Option is granted and provided that such Option is not held by an Insider, and where such Option is held by an Insider in such case, shareholder approval shall be obtained in connection with the extension;
- (f) changing the terms and conditions of any financial assistance which may be provided by the Corporation to Participants to facilitate the purchase of Common Shares under this Plan; and
- (g) adding a cashless exercise feature, payable in cash or securities, which provides for a full deduction of the number of underlying Common Shares from this Plan reserve.

Shareholder approval will be required in the case of: (i) any amendment to the amendment provisions of this Plan; (ii) any increase in the maximum number of Common Shares issuable under this Plan; (iii) any reduction in the exercise price or extension of the Option Period benefiting an insider of the Corporation; and (iv) any amendment to remove or to exceed the Insider Participation Limit, in addition to such other matters that may require shareholder approval under the rules and policies of the Exchange.

19. Necessary Approvals

The obligation of the Corporation to issue and deliver Common Shares in accordance with this Plan and Options granted hereunder is subject to applicable securities legislation and to the receipt of any approvals that may be required from any regulatory authority or stock exchange having jurisdiction over the securities of the Corporation. If Common Shares cannot be issued to a Participant upon the exercise of an Option for any reason whatsoever, the obligation of the Corporation to issue such Common Shares shall terminate and any funds paid to the Corporation in connection with the exercise of such Option will be returned to the relevant Participant (or his Eligible Assignee) as soon as practicable.

20. Stock Exchange Rules

This Plan and any option agreements entered into hereunder shall comply with the requirements from time to time of the Exchange.

21. Market Fluctuations

No amount will be paid to, or in respect of, a Participant (or any Eligible Assignee) under the Plan to compensate for a downward fluctuation in the price of Common Shares, nor will any other form of benefit be conferred upon, or in respect of, a Participant (or any Eligible Assignee) for such purpose.

The Corporation makes no representations or warranties to Participants (or any Eligible Assignee) with respect to the Plan or the Options whatsoever. Participants (and any Eligible Assignees) are expressly advised that the value of any Options in the Plan will fluctuate as the trading price of Common Shares fluctuates.

In seeking the benefits of participation in the Plan, a Participant (and each Eligible Assignee) agrees to exclusively accept all risks associated with a decline in the market price of Common Shares whether before or after the exercise of Options and all other risks associated with participation in the Plan.

22. Right to Issue Other Shares

The Corporation shall not by virtue of this Plan be in any way restricted from declaring and paying stock dividends, issuing further Common Shares, varying or amending its share capital or corporate structure or conducting its business in any way whatsoever.

23. Notice

Any notice required to be given by this Plan shall be in writing and shall be given by registered mail, postage prepaid or delivered by courier or by facsimile transmission addressed, if to the Corporation, at its principal address in Toronto, Ontario (Attention: Chief Financial Officer); or if to a Participant (or to an Eligible Assignee), to such Participant at his address as it appears on the books of the Corporation or in the event of the address of any such Participant not so appearing then to the last known address of such Participant; or if to any other person, to the last known address of such person.

24. Gender

Whenever used herein words importing the masculine gender shall include the feminine and neuter genders and vice versa.

25. Interpretation

This Plan will be governed by and construed in accordance with the laws of the Province of Ontario.

This Plan is subject to the approval of the stock exchange or exchanges on which the Common Shares are listed and, if applicable, of the shareholders of the Corporation.

26. Effective Date of Plan

This amended and restated Plan was adopted by the Board on September 22, 2014, it became effective on the date of its initial approval by shareholders of the Corporation on June 9, 2015, and it was further amended and restated effective with further approval by the Board on March 14, 2018.

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February 11, 2019

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

Dear Sirs/Mesdames:

Re: Titan Medical Inc. – Registration Statement on Form S-8

We have acted as Ontario counsel to Titan Medical Inc. (the “**Corporation**”) in connection with the preparation of a Registration Statement on Form S-8 (the “**Registration Statement**”) under the United States Securities Act of 1933, as amended (the “**Act**”), relating to the potential issuance and sale by the Corporation, from time to time, of up to 2,211,494 common shares of the Corporation (the “**Shares**”) issuable upon exercise of options (the “**Options**”) granted or issued under the Titan Medical Inc. Stock Option Plan (the “**Plan**”).

We have examined originals or copies, certified or otherwise to our satisfaction of such documents and considered such questions of law as we considered necessary as a basis for our opinion, including the Plan and resolutions of the board of directors of the Corporation approving the filing of the Registration Statement and the issuance of Shares upon the exercise of Options. In all such examinations, we have assumed (i) the genuineness of all signatures, the legal capacity of all individuals signing any documents, the authenticity of all documents submitted to us as originals, the conformity to authentic original documents of all documents submitted to us as copies, whether facsimile, photostatic, electronic, certified or otherwise, and (ii) the truthfulness of all facts set forth in the public records and in certificates of public officials.

Our opinion herein is limited to the laws of the Province of Ontario and the federal laws of Canada applicable therein.

Based on and subject to the foregoing, and provided that all necessary corporate action has been taken by the Corporation to authorize the issuance of the Options and the issuance of Shares upon the due exercise of the Options, we are of the opinion that upon issuance of Shares upon the valid exercise of Options in accordance with the terms of the Plan, including, in each case, receipt by the Corporation of payment in full for the Shares in respect of which such Options are exercised, as the case may be, such Shares will be validly issued as fully paid and non-assessable Shares.

We hereby consent to the use of our name in, and the filing of this opinion as an exhibit to, the Registration Statement. In giving such consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Act.

Yours truly,

/ s / Borden Ladner Gervais LLP



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Consent of Independent Registered Public Accounting Firm

Titan Medical Inc.
Toronto, Canada

We consent to the incorporation by reference in this Registration Statement on Form S-8 of (i) our report dated February 13, 2018, on the financial statements of Titan Medical Inc. (the "Company") for the years ended December 31, 2017 and December 31, 2016; and (ii) our report dated March 21, 2017, on the financial statements of the Company for the years ended December 31, 2016 and December 31, 2015 appearing in the Company's Registration Statement on Form 40-F filed on June 11, 2018.

/s/ BDO Canada LLP
BDO Canada LLP
Toronto, Canada

February 11, 2019