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NOTICE OF ANNUAL MEETING OF SHAREHOLDERS

TO BE HELD ON JUNE 22, 2016

AND

MANAGEMENT INFORMATION CIRCULAR

DATED MAY 20, 2016

These materials are important and require your immediate attention. They require shareholders of Titan Medical Inc. (the "Corporation") to make important decisions. If you are in doubt as to how to make such decisions, please contact your financial, legal or other professional advisors. If you have any questions or require more information with regard to voting your shares of the Corporation, please contact Computershare Trust Company of Canada at (416) 263-9200.

TITAN MEDICAL INC.

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

NOTICE OF ANNUAL MEETING OF SHAREHOLDERS

NOTICE IS HEREBY GIVEN that the annual meeting (the "**Meeting**") of shareholders of Titan Medical Inc. (the "**Corporation**") will be held at the offices of Borden Ladner Gervais LLP, Scotia Plaza, 40 King Street West, 44th Floor, Elliot Room, Toronto, ON M5H 3Y4, on **Wednesday, June 22, 2016** at 1:30 p.m., Toronto time, for the following purposes:

- 1. to receive and consider the financial statements of the Corporation for the fiscal year ended December 31, 2015, together with the report of the auditors thereon;
- 2. to elect directors of the Corporation;
- 3. to reappoint as auditors BDO Canada LLP, the incumbent auditors of the Corporation, and authorize the directors to fix the remuneration of the auditors; and
- 4. to transact such other business as may properly come before the Meeting or any adjournments thereof.

A copy of the information circular and form of proxy accompany this Notice.

Only shareholders of record as of May 18, 2016, the record date (the "Record Date"), are entitled to receive notice of the Meeting

The directors have fixed 5:00 p.m. on June 20, 2016 or the second last business day before any adjournment of the Meeting as the time before which proxies to be used at the Meeting (or any adjournment thereof) must be deposited with the Corporation or with Computershare Trust Company of Canada.

DATED the 20th day of May, 2016.

By Order of the Board

(signed) John Hargrove Chair and Chief Executive Officer Titan Medical Inc.



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

MANAGEMENT INFORMATION CIRCULAR

for the

Annual Meeting of Shareholders

to be held on June 22, 2016

Dated May 20, 2016

INFORMATION CIRCULAR

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SCHEDULE "A" – Board of Directors Mandate

TITAN MEDICAL INC. INFORMATION CIRCULAR

May 20, 2016

INTRODUCTION

This Information Circular (the "Circular") is furnished in connection with the solicitation by the management of Titan Medical Inc. (the "Corporation") of proxies to be used at the annual meeting of shareholders (the "Meeting") of the Corporation to be held at the offices of Borden Ladner Gervais LLP, Scotia Plaza, 40 King Street West, 44th Floor, Elliot Room, Toronto, ON M5H 3Y4 at 1:30 p.m. (Toronto time) on Wednesday June 22, 2016 at the place and for the purposes set forth in the accompanying Notice of Meeting. Except where otherwise indicated, this Circular contains information as of the close of business on May 20, 2016. It is expected that the solicitation will be primarily by mail but proxies may also be solicited personally by management of the Corporation at nominal cost. The cost of any such solicitation by management will be borne by the Corporation.

The Corporation may pay the reasonable costs incurred by persons who are the registered but not beneficial owners of voting shares of the Corporation (such as brokers, dealers, other registrants under applicable securities laws, nominees and/or custodians) in sending or delivering copies of this Circular and form of proxy to the beneficial owners of such shares. The Corporation will provide, without cost to such persons, upon request to the Secretary of the Corporation, additional copies of the foregoing documents required for this purpose.

FORWARD-LOOKING STATEMENTS

This Circular contains certain forward-looking statements with respect to the Corporation based on assumptions that management of the Corporation considered reasonable at the time they were prepared. These forward-looking statements, by their nature, necessarily involve risks and uncertainties that could cause actual results to differ materially from those contemplated by the forward-looking statements.

INFORMATION CONTAINED IN THIS CIRCULAR

No person has been authorized to give information or to make any representations in connection with the matters to be considered at the Meeting other than those contained in this Circular and, if given or made, any such information or representations should not be relied upon in making a decision as to how to vote on the resolutions or be considered to have been authorized by the Corporation or the Board of Directors (the "Board" or "Board of Directors") of the Corporation.

This Circular does not constitute an offer to buy, or a solicitation of an offer to sell, any securities. This Circular also does not constitute the solicitation of a proxy by any person in any jurisdiction in which such a solicitation is not authorized or in which the person making such a solicitation is not qualified to do so or to any person to whom it is unlawful to make such a solicitation.

Shareholders should not construe the contents of this Circular as legal, tax or financial advice and should consult with their own professional advisors as to the relevant legal, tax, financial or other matters in connection with the Meeting.

GENERAL PROXY MATTERS

APPOINTMENT, TIME FOR DEPOSIT AND REVOCABILITY OF PROXY

Shareholders of the Corporation are either registered or non-registered. Registered shareholders typically hold shares of the Corporation in their own names because they have requested that their shares be registered in their names on the records of the Corporation rather than holding such shares through an intermediary (intermediaries include, among others, banks, trust companies, securities dealers or brokers and trustees or administrators of self-administered RRSP's, RRIF's, RESP's and similar plans). Most shareholders are non-registered because their shares are registered in the name of either (a) an intermediary with whom the non-registered shareholder deals in respect of their shares, or (b) a clearing agency (such as The Canadian Depository for Securities Limited) of which the intermediary is a participant.

Only registered shareholders or duly appointed proxyholders will be permitted to vote at the Meeting. Non-registered shareholders may vote through a proxy or attend the Meeting to vote their own shares only if, before the Meeting, they communicate instructions to the intermediary or clearing agency that holds their shares. Instructions for voting through a proxy, appointing a proxyholder and attending the Meeting to vote are set out in this Circular.

A shareholder may receive multiple packages of Meeting materials if the shareholder holds shares of the Corporation through more than one intermediary or if the shareholder is both a registered shareholder and a non-registered shareholder for different shareholdings. Any such shareholder should repeat the steps to vote through a proxy, appoint a proxyholder or attend the Meeting, if desired, separately for each shareholding to ensure that all the shares from the various shareholders are represented and voted at the meeting.

VOTING BY PROXY

Shareholders who are unable to be present at the Meeting may vote through the use of proxies. Shareholders should convey their voting instructions using one of the two voting methods available: (1) use of the form of proxy or voting instruction form to be returned by mail, delivery or facsimile, or (2) use of the Internet voting procedure. By conveying voting instructions in one of the two ways, shareholders can participate in the Meeting through the person or persons named on the voting instruction form or form of proxy.

To convey voting instructions through any of the two methods available, a shareholder must locate the voting instruction form or form of proxy, one of which is included with the Circular in the package of Meeting materials sent to all shareholders. The voting instruction form is a white, computer scanable document with red squares marked "X" (the "voting instruction form") and is sent to most non-registered shareholders. The form of proxy is a form headed "Form of Proxy" (the "form of proxy") and it is sent to all registered shareholders and a small number of non-registered shareholders.

MAIL

A shareholder who elects to use the paper voting procedure should complete a voting instruction form or a form of proxy. If the form of proxy is already signed, do not sign it again. Complete the remainder of the voting instruction form or form of proxy. Ensure that you date and sign the form at the bottom. Completed voting instruction forms should be returned to the relevant intermediary in the envelope provided and should be received by the cut-off date shown on the voting instruction form. Completed forms of proxy should be returned in the envelope provided to the Corporation's transfer agent and registrar, Computershare Trust Company of Canada ("Computershare"), 100 University Avenue, 11th Floor, South Tower, Toronto, Ontario, M5J 2Y1 or by hand to: 8th Floor, 100 University Avenue, Toronto, Ontario M5J 2Y1 no later than 5:00 p.m. (Toronto time) on June 20, 2016 (or the second last business day preceding any adjournment of the Meeting).

FAX

A shareholder who elects to use the facsimile voting procedure should complete a voting instruction form or a form of proxy. If the form of proxy is already signed, do not sign it again. Complete the remainder of the voting instruction form or form of proxy. Ensure that you date and sign the form at the bottom. Completed voting instruction forms should be faxed to the relevant intermediary at the number provided and should be received by the cut-off date shown on the voting instruction form. Completed forms of proxy should be returned by fax to Computershare at (416) 263-9261 no later than 5:00 p.m. (Toronto time) on June 20, 2016 (or the second last business day preceding any adjournment of the Meeting).

INTERNET

Shareholders may convey their voting instructions through the Internet. The relevant website address is set out on the voting instruction form and form of proxy. Follow the instructions given through the Internet to cast your vote. When instructed to enter your Web Voting ID Number, refer to your voting instruction form or your form of proxy. Votes conveyed by the Internet must be received no later than the cut-off time given on the voting instruction form or the form of proxy.

APPOINTING A PROXYHOLDER

Shareholders unable to attend the Meeting in person may participate and vote at the Meeting through a proxyholder. The persons named on the enclosed form of proxy as proxyholders to represent shareholders at the Meeting, being John Hargrove and Reiza Rayman, are directors and/or officers of the Corporation. A shareholder has the right to appoint a person or company instead of those named above to represent such shareholder at the Meeting. A non-registered shareholder who would like to attend the Meeting to vote must arrange with the intermediary to have himself or herself appointed as the proxyholder. To appoint a person or company instead of John Hargrove or Reiza Rayman as proxyholder, strike out the names on the voting instruction form or form of proxy and write the name of the person you would like to appoint as your proxyholder in the blank space provided. That person need not be a shareholder of the Corporation.

Non-registered shareholders appointing a proxyholder using a voting instruction form should fill in the rest of the form indicating a vote "for", "against" or "withhold", as the case may be, for each of the proposals listed, sign and date the form and return it to the relevant intermediary or clearing agency in the envelope provided or by facsimile by the cut-off time given on the form. Proxyholders named on a signed form of proxy will be entitled to vote at the Meeting upon presentation of the form of proxy. No person will be entitled to vote at the Meeting by presenting a voting instruction form.

Alternatively, any shareholder may use the Internet to appoint a proxyholder. To use this option, access the website address printed on the voting instruction form or form of proxy and follow the instructions set out on the website. Refer to the control number or holder account number and proxy access number printed on the voting instruction form or form of proxy when required to enter these numbers.

REVOCATION OF VOTING INSTRUCTIONS OR PROXIES

Voting instructions submitted by mail, facsimile or through the Internet using a voting instruction form will be revoked if the relevant intermediary receives new voting instructions before the close of business on June 20, 2016 (or the second last business day before any adjournment of the Meeting).

Proxies submitted by mail, facsimile or through the Internet using a form of proxy may be revoked by submitting a new proxy to Computershare before 5:00 p.m. (Toronto time) on June 20, 2016 or the second last business day before any adjournment of the Meeting. Alternatively, a shareholder who wishes to revoke a proxy may do so by depositing an instrument in writing to such effect addressed to the attention of the Corporation's Chief Financial Officer and executed by the shareholder or by the shareholder's attorney authorized in writing. Such an instrument must be deposited at the registered office of the Corporation, located at 170 University Avenue, Suite 1000, Toronto, Ontario, M5H 3B3, before the close of business on June 20, 2016, or the second last business day before any

adjournment of the Meeting. On the day of the Meeting or any adjournment thereof, a shareholder may revoke a proxy by depositing an instrument in writing to such effect with the chair of the Meeting; however, it will not be effective with respect to any matter on which a vote has already been cast.

In addition, a proxy may be revoked by any other manner permitted by law.

VOTING OF PROXIES

The persons named in the enclosed form of proxy will vote, or withhold from voting, the shares in respect of which they are appointed in accordance with the direction of the shareholders appointing them. In the absence of such direction, such shares will be voted for the election of directors and for the appointment and remuneration of auditors as stated under the relevant headings in this Circular. The enclosed form of proxy confers discretionary authority upon the persons named therein to exercise their judgement and to vote with respect to amendments or variations to matters identified in the Notice of Meeting and with respect to other matters which may properly come before the Meeting. At the date hereof, the management of the Corporation knows of no such amendments or variations or of any other matters to come before the Meeting other than the matters referred to in the Notice of Meeting.

VOTING SHARES AND PRINCIPAL HOLDERS THEREOF

On May 18, 2016, the Corporation had outstanding 147,398,113 common shares, each carrying the right to one vote per share. Shareholders registered on the books of the Corporation (or their respective proxies) at the close of business on May 18, 2016 (the "**Record Date**") are entitled to vote at the Meeting, except to the extent that a registered shareholder transfers any of such shareholder's shares after May 18, 2016, and the transferee of such shares produces properly endorsed share certificates or otherwise establishes that such shareholder owns such shares and demands, not later than 10 days before the Meeting, that such shareholder's name be included in the list of shareholders entitled to vote at the Meeting.

As at May 18, 2016, to the knowledge of the directors and senior officers of the Corporation, no person or company beneficially owns, directly or indirectly, or exercises control or direction over greater than 10% of the common shares of the Corporation.

BUSINESS OF THE MEETING

FINANCIAL STATEMENTS

The directors will place before the Meeting the financial statements for the year ended December 31, 2015 together with the auditors' report thereon. The financial statements will have already been mailed to shareholders that have requested them and are also available on the Canadian System for Electronic Document Analysis and Retrieval ("SEDAR") website at www.sedar.com and on the Corporation's website at www.sitanmedicalinc.com. No vote by shareholders with respect to the financial statements is required or proposed to be taken.

Effective January 1, 2014, the Company changed its functional and presentation currency from the Canadian dollar to the U.S. dollar, applied on a prospective basis in accordance with IAS 21. This change reflects the continuing increase in the Company's costs being incurred in U.S. dollars, a trend which is expected to continue in the foreseeable future. All amounts are in U.S. dollars other than amounts based on share price values which are in Canadian dollars.

ELECTION OF DIRECTORS

The Corporation currently has five (5) directors, each of whom is being nominated for re-election at the Meeting. All directors are elected annually. Unless such authority is withheld, the person named in the enclosed form of proxy intends to vote for the election of the nominees whose names are set forth below. Management does not contemplate that any of the nominees will be unable to serve as a director but, if that should occur for any reason prior to the Meeting, the persons named in the enclosed form of proxy reserve the right to vote for another nominee in their discretion. Each director elected will hold office until the next annual meeting or until his office is earlier vacated in accordance with the by-law of the Corporation.

MAJORITY VOTING POLICY

The board of directors has adopted a majority voting policy to the effect that if a director nominee in an uncontested election receives a greater number of votes "withheld" than votes "for", he or she must immediately tender his or her resignation to the board of directors. The Corporate Governance and Nominating Committee will consider the director's offer to resign and make a recommendation to the board of directors whether to accept it or not. The board of directors shall accept the resignation unless there are exceptional circumstances, and the resignation will be effective when accepted by the board of directors. The board of directors shall make its final determination within 90 days after the date of the shareholder meeting and promptly announce that decision (including, if applicable, the exceptional circumstances for rejecting the resignation) in a news release. A director who tenders his or her resignation pursuant to the majority voting policy will not participate in any meeting of the board of directors or the Corporate Governance and Nominating Committee at which the resignation is considered. The majority voting policy does not apply to the election of directors at contested meetings; that is, where the number of directors nominated for election is greater than the number of seats available on the board of directors.

NOMINEES FOR ELECTION AS DIRECTORS

The following table and the notes thereto set out the names of all the persons proposed to be nominated for election as directors, their principal occupation, the date on which each became a director of the Corporation and the number of common shares of the Corporation beneficially owned, directly or indirectly, or over which control or direction is exercised by each of them as at May 18, 2016 as well as information concerning committee membership:

Name and Place of Residence	Principal Occupation	Director Since	Number of Common Shares Beneficially Owned, or Controlled or Directed, Directly or Indirectly (1)
Reiza Rayman London, Ontario, Canada	President of the Corporation	2008	4,357,117
Martin C. Bernholtz ⁽²⁾⁽³⁾ Thornhill, Ontario, Canada	Vice President, Finance of Kerbel Group Inc. (construction and land development)	2008	1,380,500
John E. Barker ⁽²⁾⁽³⁾ Burlington, Ontario, Canada	Corporate Director. Previously served as Senior Vice President, Finance, Chief Financial Officer and other senior executive positions at Zenon Environmental Inc. (environmental and water treatment)	2009	230,632
John T. Hargrove ⁽³⁾ Columbus, Georgia, U.S.A.	Chief Executive Officer and Chair of the Corporation	2010	298,200
Dr. Bruce Giles Wolff ⁽²⁾ Rochester, Minnesota, U.S.A.	Professor of Surgery, Mayo Clinic College of Medicine and Emeritus Chair of the Division of Colon & Rectal Surgery, Mayo Clinic (medical)	2014	17,552

Notes:

- (1) The information as to common shares beneficially owned, or controlled or directed, directly or indirectly, not being within the knowledge of the Corporation, has been furnished by the respective nominees individually.
- (2) Member of the Audit Committee of the Corporation.
- (3) Member of the Compensation Committee of the Corporation.

Biographies of Director Nominees

The following are brief biographies of each of the nominees for director:

John T. Hargrove – Chairman and Chief Executive Officer

Mr. Hargrove is the Chairman and Chief Executive Officer of the Corporation. He has over 40 years of executive-level health care experience. The majority of his distinguished health care career was spent with the Johnson & Johnson Family of Companies where he held positions of increasing responsibility in sales, marketing and corporate account management at Ethicon, Ethicon Endo-Surgery and Johnson & Johnson Health Care Systems. During his final position with Johnson & Johnson as Vice President of Corporate Accounts, Mr. Hargrove developed and led one of the first and most effective corporate sales programs in the health care industry. Following Johnson & Johnson, Mr. Hargrove joined Ohmeda Inc. as President, Corporate Account Management. While at Ohmeda, he successfully developed and implemented a multi-divisional corporate sales program, resulting in multi-year contracts with the majority of the largest Group Purchasing Organizations in the United States. Under Mr. Hargrove's supervision, Ohmeda's Corporate Account Division assisted buying groups, hospitals and integrated delivery networks in overall business and strategic planning and helped numerous customers who were under pressure to measure quality healthcare according to business as well as clinical and safety outcomes. Mr. Hargrove holds a Bachelor of Arts degree in Marketing from the University of Georgia and has completed executive management programs at Duke, Harvard and the University of Michigan.

Reiza Rayman - President and Director

Dr. Rayman is the President and a director of the Corporation. His training in both biophysics and medicine has allowed a broad perspective on new technology and devices as they relate to surgery. As a researcher in fluid dynamics, he concentrated on the role of the fluid dynamics of blood flow as it relates to arteriosclerosis. During subsequent medical training, Dr. Rayman became interested in MIS techniques and devices, and researched the physiologic effects of MIS on infants during prolonged procedures. Additionally, his interest in the device area led to concepts and experimentation using magnetism for bowel retraction during MIS. Dr. Rayman collaborated with Dr. Doug Boyd to implement and develop new techniques related to robotic cardiac surgery. The two performed the world's first robotic beating heart cardiac bypass surgery in September 1999. Subsequently, Dr. Rayman authored grants to the federal and provincial governments to research several areas of robotic surgery. These grants were successful, and totalled to a program of \$30 million, the largest research program in the history of the London Health Sciences Centre. Dr. Rayman has conducted extensive research on substantially all available robotic platforms and is currently an active practitioner who has performed over 400 robotic surgeries. Dr. Rayman held roles including Assistant Professor, Department of Surgery, at the University of Western Ontario. Dr. Rayman holds an M.Sc. (Medical Biophysics) in Fluid Dynamics from The University of Western Ontario, an M.D. from The University of Toronto, and a Ph.D. in Telesurgery from The University of Western Ontario.

Martin C. Bernholtz - Director

Mr. Martin Bernholtz, BBA, CPA, CA is the Chief Financial Officer of Kerbel Group Inc. (since 1987), an integrated Construction and Land Development Company. In this capacity he is responsible for strategy, finance, accounting, taxation and personnel. Mr. Bernholtz has considerable business experience in real estate, finance and public markets. Mr. Bernholtz graduated with a Bachelor degree in Business Administration from York University in 1981 and became a Chartered Accountant in 1984. While in practice at Laventhol & Horwath and at BDO Dunwoody, he practiced in the Business Valuation, Litigation Support and Strategy areas.

John E. Barker - Director

Mr. Barker is a finance professional with general management experience. Mr. Barker previously acted as the Senior Vice President of Finance, Chief Financial Officer and in other senior executive positions at Zenon Environmental Inc., a Toronto Stock Exchange listed company, from 2000 to 2006. He was responsible for managing the finance and information technology of over 35 subsidiary companies in 25 different countries. During his career, Mr. Barker has held senior positions in finance and operations as well as overseeing human resources, information technology and procurement. Mr. Barker currently sits as a director, Chair of the Board of Directors and Audit Committee Chair of Ecosynthetix Inc., a TSX listed company. Mr. Barker is a Fellow of the Chartered Professional Accountants of Canada and holds the FCMA designation.

Bruce Giles Wolff – Director

Dr. Bruce Giles Wolff, M.D., is a Professor of Surgery at Mayo Clinic College of Medicine and Emeritus Chair of the Division of Colon & Rectal Surgery at Mayo Clinic in Rochester, Minnesota. Dr. Wolff has been a member of the Mayo Clinic's Surgical Administrative Committee since 2006. Dr. Wolff is continuing his association with Mayo Clinic, on a reduced surgical schedule, and is the associate executive director for the American Board of Colon and Rectal Surgery. Dr. Wolff has written extensively on colon and rectal surgery issues in almost 300 articles for publications such as The American Journal of Surgery, the Canadian Journal of Surgery, the World Journal of Surgery, Mayo Clinic Proceedings, the America Surgeon, the Journal of Gastrointestinal Surgery, Diseases of the Colon & Rectum, Annals of Surgery and the British Journal of Surgery. Dr. Wolff received his M.D. from Duke University School of Medicine and interned and completed his residency at the New York Hospital Cornell Medical Centre. He received a fellowship from the Mayo Clinic in 1981-82 and since then he has taught and practiced medicine at the Mayo Clinic.

Corporate Cease Trade Orders, Bankruptcies, Penalties or Sanctions

To the knowledge of the Corporation, none of the persons nominated for election as directors at the Meeting: (a) is, as at the date of this Circular, or has been, within the 10 years before the date of this Circular, a director, chief executive officer or chief financial officer of any company that: (i) was subject to a cease trade order, an order similar to a cease trade order or an order that denied the relevant company access to any exemption under securities legislation, that was in effect for a period of more than 30 consecutive days (an "Order") that was issued while the person was acting in the capacity as director, chief executive officer or chief financial officer; or (ii) was subject to a an Order that was issued after the person ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer; (b) is, as at the date of this Circular, or has been within 10 years before the date of this Circular, a director or executive officer of any company that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or (c) has, within the 10 years before the date of this Circular, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the person.

To the knowledge of the Corporation, none of the persons nominated for election as directors at the Meeting, nor any personal holding company thereof owned or controlled by them: (i) has been subject to any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or (ii) has been subject to any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

Interest of Management and Others in Material Transactions

No proposed director of the Corporation or informed person, or any associate or affiliate of a proposed director of the Corporation or informed person has any material interest, direct or indirect, in any transaction in which the Corporation has participated since the commencement of the Corporation's most recently completed financial year, or in any proposed transaction which has materially affected or will materially affect the Corporation.

STATEMENT OF EXECUTIVE COMPENSATION

Named Executive Officers

The Corporation had four Named Executive Officers in 2015, being:

- (1) John T. Hargrove, Chair and Chief Executive Officer
- (2) Reiza Rayman, President
- (3) Stephen Randall, Chief Financial Officer and Secretary of the Corporation
- (4) Dennis Fowler, Executive Vice President, Clinical and Regulatory Affairs
- (5) Jasminder Brar, Director, Strategic Development & IP

(collectively, the "Named Executive Officers" or "NEO").

Compensation Discussion and Analysis

The Board of Directors is responsible for evaluating compensation for the Chief Executive Officer, the President, the Chief Financial Officer, the Executive Vice President, Clinical and Regulatory Affairs and the Director, Strategic Development & IP, and reviewing their salaries and any bonuses on an annual basis. The Chief Executive Officer and the President are responsible for evaluating and reviewing the salaries and bonuses of all other officers, employees and consultants of the Corporation. While the Board of Directors of the Corporation has not adopted a

written policy concerning the compensation of executive officers, it has developed a consistent approach and philosophy relating to executive compensation. The overriding principles in the determination of executive compensation are the need to provide total compensation packages that will attract and retain qualified and experienced executives, reward the executives for their contribution to the overall success of the Corporation and integrate the longer term interest of the executives with the investment objectives of the Corporation's shareholders.

The Corporation has only four executive officers, and places primary importance on the talent of these employees to manage and grow the Corporation. Based on the size of the Corporation and its relatively small number of employees, the Corporation's executives are required to be multi-disciplined, self-reliant and highly experienced. In determining specific compensation amounts for the Chief Executive Officer, the President, the Chief Financial Officer, the Executive Vice President, Clinical and Regulatory Affairs and the Director, Strategic Development & IP, the Board of Directors considers factors such as experience, individual performance, length of service, role in achieving corporate objectives, positive research and development results, stock price and compensation compared to other employment opportunities for executives.

The Corporation is an early-stage company engaged in the development and commercialization of robotic surgical technologies. As the Corporation is in the product development stage, it cannot rely on revenues from its operations to finance its activities and advance its goals. Consequently the Corporation looks to raising the requisite capital to finance such activities through equity financings, which are influenced by the financial market's assessment of the Corporation's overall enterprise value and its prospects. These in turn are influenced, to a great extent, by the results of its research and development activities and progress in commercializing robotic surgical technologies. The contribution that each of the Chief Executive Officer, the President, the Executive Vice President, Clinical and Regulatory Affairs and the Director, Strategic Development & IP make to this endeavour, on a subjective analysis by the Compensation Committee and the Board of Directors at the end of each fiscal year, is the primary factor in determining aggregate compensation. In considering such contribution, the Board of Directors considers various factors, including, among other things, (i) the ongoing and progressive development of the Corporation's robotic surgical technology; (ii) the identification and attainment of appropriate milestones that adequately reflect the ongoing development of the Corporation's robotic surgical technology, (iii) the formation and development of key partnerships with leading academic and research organizations through which the Corporation's products can be tested, and (iv) the recruitment, management and retention of qualified technical and other personnel, among other things.

Executive compensation consists of base salary or professional consulting fees, cash bonuses and incentive stock options. In establishing compensation, the Board of Directors attempts to pay competitively in the aggregate as well as deliver an appropriate balance between annual compensation (base salary or professional consulting fees and cash bonuses) and option based compensation (incentive stock options).

The role of the Compensation Committee in recommending to the Board the compensation for Named Executive Officers is described under "Compensation and Compensation Committee".

The decisions in respect of each individual compensation element are taken into account in determining each other compensation element to ensure a Named Executive Officer's overall compensation is consistent with the objectives of the compensation program while considering that not all objectives are applicable to each Named Executive Officer.

The Compensation Committee did not follow a formal practice to consider the implications of the risks associated with the Corporation's compensation policies and practices in 2015.

The Corporation has established a stock option plan for officers, directors, employees and service providers of the Corporation, prepared in compliance with the requirements of the TSX, which is administered by the Board of Directors. The purpose of the Corporation's stock option plan is to advance the interests of the Corporation by closely aligning the participants' personal interests with those of the Corporation's shareholders generally. Subject to the provisions of the stock option plan, the Board of Directors determines and designates from time to time the optionees to whom options are to be granted, the number of common shares to be optioned and the other terms and conditions of the stock option grant. The Board of Directors considers factors such as individual performance, the

significance of individual contribution to the success of the Corporation, experience, and length of service in determining the amounts of options awarded.

Compensation Committee

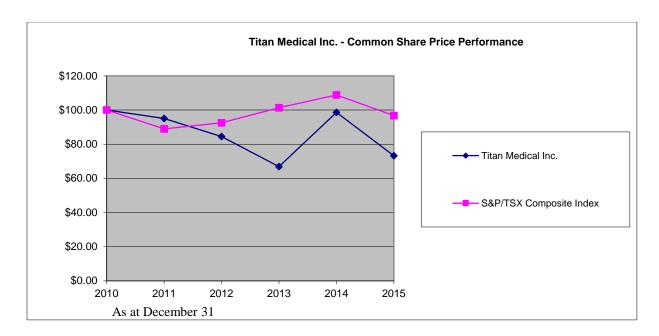
The awarding of all compensation including option-based awards is subject to the discretion of the Compensation Committee and Board, exercised annually, as more fully described herein, and is at risk and not subject to any minimum amount. Furthermore, if the Compensation Committee determines that the compensation of the Corporation for certain executives and other personnel, including option-based awards, is low compared to comparable companies, the Compensation Committee may determine to grant option-based awards to assist the Corporation in retaining and attracting key executive talent and to further align the compensation of the executive officers and other key employees with long-term interests of shareholders. The Compensation Committee and the Board also have the discretion to adjust the weightings assigned to objectives for executives, including the Chief Executive Officer, and award a higher or lower annual incentive value to one or more executive officers than achievement of applicable corporate objectives might otherwise suggest, based on their assessment of the challenges and factors that might have impacted the ability to achieve the objective or attain the highest assessment ranking, or other factors such as rewarding individual performance or recognizing the ability (or inability) of the Corporation to achieve its goals and strategic objectives and create shareholder value. In exercising its discretion, the Compensation Committee and Board may also consider, among other factors, risk management and regulatory compliance, the performance of executive officers in managing risk and whether payment of the incentive compensation might present or give rise to material risks to the Corporation or otherwise affect the risks faced by the Corporation and the management of those risks.

In assessing the general competitiveness of the compensation of the Corporation's Named Executive Officers, the Compensation Committee considers base salary, total cash compensation and total direct compensation (including the value of long term incentives) relative to a comparator group of publicly listed companies and reviews benchmark data composed of the group's executive compensation data for matching positions.

In addition to advice obtained from compensation consultants, the Compensation Committee undertakes its own assessment of the competitiveness of the Corporation's compensation and incentive programs, based on information obtained from such consultants and other information that may be available to the Compensation Committee. Decisions as to compensation are made by the Compensation Committee and the Board and may reflect factors and considerations other than the information and, if applicable, recommendations provided by compensation consultants.

Performance Graph

The common shares of the Corporation are listed on the Toronto Stock Exchange ("TSX") and also trade on the OTCQX. The following graph illustrates the Corporation's cumulative shareholder return over the five most recently completed financial years, as measured by the closing price of the Common Shares at the end of the financial years ended December 31, 2011, 2012, 2013, 2014 and 2015, assuming an initial investment of CDN\$100 on December 31, 2010, compared to the closing price of the S&P/TSX Composite Index over the same period.



The following table shows the value of CDN\$100 invested in Common Shares on December 31, 2010 compared to CDN\$100 invested in the S&P/TSX Composite Index*:

	31-Dec-10	31-Dec-11	31-Dec-12	31-Dec-13	31-Dec-14	31-Dec-15
Titan Medical Inc.	100	95.07	84.51	66.90	98.59	73.24
S&P/TSX Composite Index	100	88.93	92.49	101.33	108.85	96.78

^{*}All amounts in Canadian \$.

The compensation paid by the Corporation to its Named Executive Officers in 2015 was not based in whole or in part on the trading price of the Common Shares in 2015 and does not compare to the trends in such trading price or the above market indices.

Summary Compensation Table

The following table and the notes thereto sets forth information concerning annual total compensation for each Named Executive Officer in 2015, in respect of the fiscal years ended December 31, 2015, 2014, and 2013. All amounts in the table below and the notes thereunder are stated in Titan's functional and presentation currency which is U.S. dollars. The exercise prices of options are presented in Canadian currency as they are exercisable in Canadian dollars. Canadian employees are compensated in Canadian dollars. For reporting purposes, the Canadian dollar amount is translated to U.S. dollars using the noon exchange rate, as quoted by the Bank of Canada, on the payroll date.

Name and principal position	Year Ended Dec. 31	Salary (U.S.\$)	Share- based Awards (U.S.\$)	Option- based Awards ⁽¹⁾ (U.S.\$)	Non-equity Plan Com (\$ Annual Incentive Plans	pensation	Pension Value (U.S.\$)	All Other Compensation (U.S.\$)	Total Compensation (U.S.\$)
Reiza Rayman President	2015	184,524	0	31,773	0	0	0	0	216,297
rresident	2014	213,843	0	36,588	0	0	0	0	250,431
	2013	222,733	0	37,608	0	0	0	0	260,341

Name and principal	Year Ended	Salary	Share- based	Option- based	Non-equity Plan Com (\$	pensation	Pension Value	All Other Compensation	Total Compensation
position	Dec. 31	(U.S.\$)	Awards (U.S.\$)	Awards ⁽¹⁾ (U.S.\$)	Annual Incentive Plans	Long- term Incentive Plans	(U.S.\$)	(U.S.\$)	(U.S.\$)
John T.	2015	203,500	0	79,434	0	0	0	0	282,934
Hargrove Chief Executive	2014	145,000	0	91,470	0	0	0	0	236,470
Officer	2013	156,974	0	269,725(3)	0	0	0	0	426,699
Stephen Randall	2015	150,515	0	79,434	0	0	0	0	229,949
Chief Financial Officer	2014	162,285	0	91,470	0	0	0	0	253,755
	2013	147,439	0	87,157	0	0	0	0	234,596
Dennis Fowler Executive Vice	2015	231,250	0	79,434	0	0	0	0	310,684
President, Clinical and Regulatory Affairs	2014	114,581	0	91,470	0	0	0	0	206,051
Jasminder Brar	2015	120,481	0	79,434	0	0	0	0	199,915
Director of Strategic Development & Intellectual Property	2014	112,370	0	91,470	0	0	0	0	203,840

Notes:

- (1) The fair value of options granted was estimated at the date of grant using the Black-Scholes option pricing model using assumptions based on expected life, risk free rate, expected dividend yield and expected volatility.
- (2) Of this amount, \$29,500 relates to stock options granted for John Hargrove's role as director, prior to him becoming Chief Executive Officer and Chair of the Corporation effective March 19, 2013.

Outstanding share-based awards and option-based awards

The following table shows all awards granted to Named Executive Officers and outstanding on December 31, 2015.

		Option-ba	sed Awards		Share-based Awards			
Name	Number of securities underlying unexercised options (#)	Option Exercise Price CDN(\$)	Option Expiration Date (DD-M-YY)	Value of unexercised in-the- money options USD(\$)	Number of shares or units of shares that have not vested (#)	Market or payout value of share-based awards that have not vested USD(\$)	Market or payout value of vested share-based awards not paid out or distributed USD(\$)	
Reiza	80,000	1.27	09-Feb-16	0	0	0		
Rayman	59,413	1.49	14-Feb-17	0	0	0		
	88,474	0.56	02-Aug-18	30,683	0	0		
	27,934	1.94	21-May-19	0			0	
	39,753	1.72	09-Jun-20	0			0	
	15,827	1.02	23-Dec-20	229			0	
John T.	10,606	1.66	15-Aug-16	0	0	0	0	
Hargrove	15,391	1.39	15-May-17	0	0	0	0	
	49,591	0.83	21-Mar-18	7,524	0	0	0	
	178,231	0.56	02-Aug-18	61,811	0	0	0	
	231,764	0.96	20-Dec-18	13,396	0	0	0	
	106,096	1.76	06-Mar-19	0				
	69,835	1.94	21-May-19	0				
	99,383	1.72	09-Jun-20					
	39,567	1.02	23-Dec-20	572				
Stephen	29,706	1.49	14-Feb-17	0	0	0	0	
Randall	125,038	0.56	02-Aug-18	43,363	0	0	0	
	69,835	1.94	21-May-19	0	0	0	0	

		Option-ba	sed Awards		Share-based Awards				
Name	Number of securities underlying unexercised options (#)	Option Exercise Price CDN(\$)	Option Expiration Date (DD-M-YY)	Value of unexercised in-the- money options USD(\$)	Number of shares or units of shares that have not vested (#)	Market or payout value of share-based awards that have not vested USD(\$)	Market or payout value of vested share-based awards not paid out or distributed USD(\$)		
	99,383	1.72	09-Jun-20						
	39,567	1.02	23-Dec-20	572					
Dennis	69,835	1.94	21-May-19	0	0	0	0		
Fowler	99,383	1.72	09-Jun-20						
	39,567	1.02	23-Dec-20	572					
Jasminder	9,469	1.49	14-Feb-17	0	0	0	0		
Brar	37,142	0.56	02-Aug-18	12,881	0	0	0		
	69,835	1.94	21-May-19	0	0	0	0		
	99,383	1.72	09-Jun-20	0	0	0	0		
	39,567	1.02	23-Dec-20	572	0	0	0		

The following table shows the value from incentive plans vested or earned by Named Executive Officers under the Corporation's incentive plans and the annual incentive bonus payout during the financial year ended December 31, 2015.

Name	Option-based awards – Value vested during the year USD(\$)	Share-based awards – Value vested during the year USD(\$)	Non-equity incentive plan compensation – Value earned during the year USD(\$)
Reiza Rayman	1,616	-	0
John T. Hargrove	2,602	=	0
Stephen Randall	2,640	-	0
Dennis Fowler	(15,137)	-	0
Jasminder Brar	(7,582)	-	0

Stock Option Plan and Stock Options

See "Statement of Executive Compensation - Compensation Discussion and Analysis" for information on the Corporation's stock option plan.

Securities Authorized for Issuance Under Equity Compensation Plan

The following table sets forth certain information as of December 31, 2015 with respect to compensation plans under which equity securities of the Corporation are authorized for issuance:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining for future issuance under equity compensation plan
Equity compensation plan	2,897,763	\$1.20	8,747,986
approved by securityholders			

Termination and Change of Control Benefits

No Named Executive Officer is entitled to any form of compensation as a result of termination or change of control of the Corporation.

Indebtedness of Directors and Executive Officers

No director or executive officer of the Company, nor any proposed nominee for election as a director of the Company, nor any associate or affiliate of any of them is or was indebted to the Company at any time since the beginning of the last completed financial year of the Company.

Compensation of Directors

For the year ended December 31, 2015, compensation of directors was as follows: each director of the Corporation received an annual retainer of \$15,000 and an additional \$1,000 for each board meeting attended. Each non-employee director who also served as chair of a committee of the board received an additional \$2,500.

The Board of Directors determines the form of payment of the compensation paid to directors. All compensation to directors is paid through the issuance of stock options, or cash, at the discretion of the directors, on an annual basis. Currently all directors compensation is paid through stock options. The table below reflects in detail the compensation earned by non-employee directors in the 12-month period ended December 31, 2015.

Name	Fees Earned CDN(\$)	Share-based Awards CDN(\$)	Option-based Awards CDN(\$)	Non-equity Incentive Plan Compensation CDN(\$)	Pension Value CDN(\$)	All Other Compensation CDN(\$)	Total CDN(\$)
Martin C. Bernholtz	0	0	27,324	0	0	0	27,324
John E. Barker	0	0	27,324	0	0	0	27,324
Dr. Bruce Wolff	0	0	24,538	0	0	0	24,538

Directors' and Officers' Insurance

The Corporation maintains insurance for the benefit of the Corporation and its directors and officers as a group, in respect of the performance by them of duties of their office. The amount of insurance purchased for the period commencing January 1, 2015 and ended December 31, 2015, was for an aggregate limit of liability (inclusive of costs of defence) of \$7,000,000. There is a deductible amount on a per loss basis of up to \$25,000 for a claim against the Corporation. The premium is paid by the Corporation without distinction as to directors as a group or officers as a group. The premium paid for such insurance in 2015 was \$20,973.

Outstanding share-based awards and option-based awards

The following table shows all option-based and share-based awards granted to non-employee directors and outstanding on December 31, 2015.

		Option-ba	sed Awards			Share-based Awa	ards
Name	Number of securities underlying unexercised options (#)	Option Exercise Price per share CDN(\$)	Option Expiration Date (DD-M-YY)	Value of unexercised in-the-money options USD(\$)	Number of shares or units of shares that have not vested (#)	Market or payout value of share-based awards that have not vested (\$)	Market or payout value of vested share-based awards not paid out or distributed (\$)
Martin C.	11,633	1.66	15-Aug-16	0	0	0	0
Bernholtz	16,750	1.39	15-May-17	0	0	0	0
	77,415	0.56	02-Aug-18	26,848	0	0	0
	21,649	1.94	21-May-19	0	0	0	0
	31,306	1.72	09-Jun-20				
	12,463	1.02	23-Dec-20	180			
John E.	10,606	1.66	15-Aug-16	0	0	0	0
Barker	15,391	1.39	15-May-17	0	0	0	0
	72,991	0.56	02-Aug-18	25,313	0	0	0
	22,813	1.94	21-May-19	0	0	0	0
	31,306	1.72	09-Jun-20				
	12,463	1.02	23-Dec-20	180			
Bruce G.	31,658	1.94	21-May-19	0	0	0	0
Wolff	24,846	1.72	09-Jun-20				
	9,891	1.02	23-Dec-20	143			

Incentive Plan Awards - Value Vested or Earned During Fiscal Year and December 31, 2015

The following table shows the value from incentive plans vested or earned by non-employee directors under the Corporation's incentive plans and the annual incentive bonus payout during the financial year ended December 31, 2015.

Name	Option-based awards – Value vested during the year USD(\$)	Share-based awards – Value vested during the year (\$)	Non-equity incentive plan compensation – Value earned during the year (\$)
Martin C. Bernholtz	(15,201)	0	0
John E. Barker	(15,021)	0	0
Bruce Wolff	(12,064)	0	0

CORPORATE GOVERNANCE PRACTICES

The Canadian Securities Administrators have adopted National Instrument 58-101 – *Disclosure of Corporate Governance Practices* (the "**Disclosure Rule**"). The Disclosure Rule establishes disclosure requirements regarding corporate governance practices of a reporting issuer as well as the requirement to file any written code of business conduct and ethics that a reporting issuer has adopted. Set out below is a description of the Corporation's approach to corporate governance as required by the Disclosure Rule.

Board of Directors

Currently, three of the five members of the Board of Directors are independent directors. An independent director is defined as a director who has no direct or indirect material relationship with the Corporation, being a relationship which could be reasonably expected to interfere with the exercise of a director's independent judgement. As at December 31, 2015, Messrs. Reiza Rayman and John Hargrove are considered to be non-independent by virtue of their management positions with the Corporation and their employment relationships with the Corporation. The Board believes that their extensive knowledge of the Corporation's business and affairs is beneficial to the other directors and their participation as directors contributes to the effectiveness of the Board. Messrs. Martin C. Bernholtz, John E. Barker and Bruce Wolff are considered to be independent directors. These determinations were made by the Board based upon an examination of the factual circumstances of each director and consideration of any interests, business or relationships, which any director may have with the Corporation.

As part of each regularly scheduled quarterly board meeting, the independent directors have an in camera session, exclusive of non-independent directors and management. At the present time, the Board believes that the knowledge, experience and qualifications of its independent directors are sufficient to ensure that the Board can function independently of management and discharge its responsibilities.

The Chair of the Board, John Hargrove, who also serves as Chief Executive Officer, is not an independent director, nor does the Corporation have a designated lead director. The Board utilizes its own in-house expertise, and that of its legal counsel, to provide advice and consultation on current and anticipated matters of corporate governance.

Director Meetings

The Board of Directors held 17 meetings during the financial year ended December 31, 2015. The following table summarizes the attendance record for each of the directors at meetings of the Board of Directors, Audit Committee and Compensation Committee. The Corporate Governance and Nominating Committee did not hold any meetings during the year.

Name	Number of Meetings Attended by the Directors		
	Board of Directors	Audit Committee	Compensation Committee
Reiza Rayman	12/12	N/A	N/A
Martin C. Bernholtz	12/12	4/4	1/1
John E. Barker	12/12	4/4	1/1

Name	Number of Meetings Attended by the Directors		
Name	Board of Directors	Audit Committee	Compensation Committee
John T. Hargrove	12/12	N/A	1/1
Bruce Wolff	12/12	4/4	N/A

Other Reporting Issuer Experience

The following directors of the Corporation are directors of the following reporting issuers (other than the Corporation) as of the date of this Circular:

Name	Name of Reporting Issuer	Name of Exchange/Market
Martin C. Bernholtz	Continental Precious Metals Inc.	TSX
Martin C. Dermione	Covalon Technologies Inc.	TSX-V
	Lingo Media Corporation	TSX-V
	KGIC INC.	TSX-V
	Musgrove Minerals Corp.	TSX-V
	Select Core Ltd.	TSX-V
	Nanostruck Technologies Inc.	CNSX
John E. Barker	Ecosynthetix Inc.	TSX

Board Mandate

The Board of Directors is responsible for the overall stewardship of the Corporation and operates pursuant to a written mandate, which was updated and approved by the Board on February 10, 2015 and as set out in Schedule "A" to this management information circular.

Position Descriptions

The Board has developed written position descriptions for the Chair of the Board of Directors and the chair of each committee. With respect to management's responsibilities, generally, any matters of material substance to the Corporation are submitted to the Board for, and are subject to, its approval. Such matters include those matters which must by law be approved by the Board (such as share issuances) and other matters of material significance to the Corporation, including any debt or equity financings, investments, acquisitions and divestitures, and the incurring of material expenditures or legal commitments. The Board and/or its audit committee also reviews and approves the Corporation's major communications with shareholders and the public including the annual report, if any, (and financial statements contained therein), quarterly reports to shareholders, the annual management information circular and the annual information form. The specific corporate objectives which the chief executive officer is responsible for meeting (aside from the overall objective of enhancing shareholder value) are, in the Corporation's case, typically related to the advancement, growth, management and financing of the Corporation and its research and development project and matters ancillary thereto.

Orientation and Continuing Education

The Corporation does not provide a formal orientation or education program for Board members, as it believes that such programs are not appropriate for a development stage company with an experienced Board, the members of which have been selected for their specific expertise.

The Corporation's directors are highly experienced and knowledgeable, both individually and as a group. The directors have either a medical or business background and have long careers in or related to the medical, health or financial industry and are intimately familiar with the Corporation's project, through sufficient interactions with management and technology developers.

To ensure that the Board has and maintains the skill and knowledge necessary for them to meet their obligations as directors of the Corporation, each of the directors has visited the Corporation's research and development facility and observed the performance of SPORTTM Surgical System. Summary technology presentations by management

relating to various aspects of the Corporation's project is made at meetings of the Board. The Board believes that discussion among the directors and management at these meetings provides a valuable learning resource for the directors with non-technical expertise in the subject matter presented, and that those directors provide management with valuable insights into broader issues facing the Corporation.

Ethical Business Conduct

The Corporation is committed to maintaining high standards of corporate governance and this philosophy is communicated by the Board to management, and by management to employees, on a regular basis. Given the Corporation's relatively small workforce, the Board has not considered it necessary to adopt a formal code of business conduct and ethics or whistleblower policy, but will regularly consider whether it would be advisable to adopt such a code or policy in the future.

In order to ensure that the directors exercise independent judgment in considering transactions and agreements, the Board requires that all directors declare any conflicts of interest with issues or situations as they arise. This would include transactions/agreements in which a director/officer has material interest.

Nomination of Directors

The Corporate Governance and Nominating Committee is a standing committee appointed by the Board and it is responsible for overseeing and assessing the functioning of the Board and the committees of the Board and for the development, recommendation to the Board, implementation and assessment of effective corporate governance principles. The Committee's responsibilities also include identifying candidates for directorship and recommending that the Board select qualified director candidates for election at the next annual meeting of shareholders.

The Corporate Governance and Nominating Committee is composed entirely of independent directors, being John E. Barker, Martin C. Bernholtz and Bruce Wolff.

Audit Committee

The Board of Directors has established an Audit Committee. The Audit Committee met four times during the financial year ended December 31, 2015.

Audit Committee Charter

The text of the Audit Committee Charter is attached as Schedule "A" to the Corporation's Annual Information Form for the year ended December 31, 2015, a copy of which is available on SEDAR.

Composition of the Audit Committee

As of the date of this information circular, the table below sets out the members of the Audit Committee and states whether they are financially literate and/or independent.

Director	Independent	Financially Literate
John E. Barker	Yes	Yes
Martin C. Bernholtz	Yes	Yes
Dr. Bruce Wolff	Yes	Yes

Relevant Education and Experience

Messrs. Barker and Bernholtz are directors on the Corporation's Audit Committee and have been senior officers and/or directors of publicly traded companies and business executives for a number of years. Although Dr. Wolff does not have experience as a director or officer of any other publicly traded company, he has served as a director of the Corporation since March 11, 2014. Additionally, Dr. Wolff is a former President of the American Society of Colon and Rectal Surgeons, a former Director and President of the American Board of Colon and Rectal Surgery

and a former Vice President and Director of the Foundation for Surgical Fellowships. In these positions, each director has been responsible for receiving financial information relating to the entities of which they were directors. They had, or have developed an understanding of financial statements generally and understand how those statements are used to assess the financial position of a company and its operating results. Each member of the Audit Committee also has a significant understanding of the business in which the Corporation is engaged and has an appreciation for the relevant accounting principles for the Corporation's business.

External Auditor Service Fees

The table below sets out all fees billed by the Corporation's external auditor in respect of the last two financial years. The Audit Committee has adopted procedures for the engagement of non-audit services as described in section 3 of its charter under "Duties and Responsibilities".

Financial Year Ended	Audit Fees ⁽¹⁾	Audit-Related Fees(2)	Tax Fees ⁽³⁾	All Other Fees ⁽⁴⁾
December 31, 2015	\$28,606	\$19,089	\$2,072	\$57,393
December 31, 2014	\$31,202	\$36,738	\$4,426	\$103,117

Notes:

- (1) "Audit Fees" are fees billed by the Corporation's external auditor for services provided in auditing the Corporation's financial statements for the financial year.
- (2) "Audit-Related Fees" are fees not included in Audit Fees that are billed by the auditor for assurance and related services that are reasonably related to performing the audit or reviewing the Corporation's interim financial statements.
- (3) "Tax Fees" are fees billed by the auditor for professional services rendered for tax compliance, tax advice and tax planning.
- (4) "All Other Fees" are fees billed by the auditor for products and services not included in the previous categories.

Compensation and Compensation Committee

Compensation matters are dealt with by the Compensation Committee of the Corporation. The function of the Compensation Committee is to review the compensation terms of each officer of the Corporation annually as well as at any other times as necessary. After considering inputs from senior management, the Compensation Committee makes a recommendation to the Board for approved compensation terms for each officer of the Corporation. Among other things, the Compensation Committee also recommends the structure of the compensation in terms of the amount of cash and/or number of options to be granted.

John E. Barker is the chair of the Compensation Committee and has served in such capacity since March 6, 2014. He has several years of experience in compensation administration, gained through senior leadership roles. The other members of the Compensation Committee have several years of relevant experience, having served as senior business executives with other companies and as members of compensation committees of other companies.

Two of the members of the Compensation Committee, namely, Messrs. Bernholtz and Barker, are considered to be independent directors. John Hargrove, who also serves as a member of the Compensation Committee, was appointed Chief Executive Officer on March 19, 2013, he is not considered to be independent as a result of the appointment. Although the Compensation Committee is not composed entirely of independent directors, the Board ensures an objective compensation process by encouraging the independent members of the Compensation Committee to raise concerns and participate actively in the compensation process. The Compensation Committee met one time during the financial year ended December 31, 2015.

Other Board Committees

The Board has no standing committee other than the Audit Committee, the Compensation Committee and the Corporate Governance and Nominating Committee.

Assessments

The Board, its committees and individual directors are not regularly assessed with respect to their effectiveness and contribution, as the Board believes that such assessments are generally more appropriate for corporations of

significantly larger size and complexity than the Corporation and which may have significantly larger boards of directors. A more formal assessment process will be instituted as, if, and when the Board deems necessary.

Director Tenure

It is proposed that each of the persons elected as a director at the Meeting will serve until the close of the next annual meeting of the Corporation or until his or her successor is elected or appointed. The Board has not adopted a term limit for directors. The Board believes that the imposition of director term limits on a board may discount the value of experience and continuity amongst board members and runs the risk of excluding experienced and potentially valuable board members. The Board does not follow a formal director assessment procedure in evaluating Board members. However, the Board believes that it can best strike the right balance between continuity and fresh perspectives without mandated term limits.

Representation of Women on the Board and in Executive Officer Positions

The Corporate Governance and Nominating Committee's Charter encourages diversity in the composition of the Board and requires periodic review of the composition of the Board as a whole to recommend, if necessary, measures to be taken so that the Board reflects the appropriate balance of diversity, knowledge, experience, skills and expertise required for the Board as a whole. Accordingly, while the Board has not adopted a written policy nor targets relating to the identification and nomination of women directors, the Board does take into consideration a nominee's potential to contribute to diversity within the Board. Given that diversity is part of determining the overall balance, which includes gender, the Board has not adopted a gender specific policy target.

The Corporate Governance and Nominating Committee recognizes the value of diversity. Currently, the Board is comprised of male directors. The Board does not follow a formal process for proposing female nominees for Board vacancies. Rather the Board focuses on the qualification and professional or business experience of each individual nominee.

Consistent with the Corporation's approach to diversity at the Board level, the Corporation's hiring practices include consideration of diversity across a number of areas, including gender. None of the current executive officer positions of the Corporation are held by women. The Corporation does not have a target number of women executive officers. Given the small size of its executive team, the Corporation believes that implementing targets would not be appropriate. However, in its hiring practices, the Corporation considers the level of representation of women in executive officer positions.

APPOINTMENT AND REMUNERATION OF AUDITORS

Unless such authority is withheld, the persons named in the enclosed instrument of proxy intend to vote for the re-appointment of BDO Canada LLP, Chartered Accountants, Licensed Public Accountants, of Toronto, Ontario, as auditors of the Corporation to hold office until the next annual meeting of shareholders and to authorize the directors to fix their remuneration. BDO Canada LLP were first appointed auditors of the Corporation on December 13, 2010.

OTHER ITEMS OF BUSINESS

Management is not aware of any other matters which are to come before the Meeting other than the matters referred to in the Notice of Meeting. However, if any matters other than those referred to herein should be presented at the Meeting, the persons named in the enclosed proxy are authorized to vote the shares represented by the proxy in accordance with their best judgement.

INTEREST OF CERTAIN PERSONS OR COMPANIES IN MATTERS TO BE ACTED UPON

Other than as disclosed elsewhere in this Circular, no director or executive officer of the Company, nor any associate or affiliate of any one of them, has any material interest, direct or indirect, by way of beneficial ownership of securities or otherwise, in any matter to be acted on at the Meeting.

ADDITIONAL INFORMATION

Financial information for the Corporation is provided in the Corporation's comparative annual financial statements and management's discussion and analysis for the most recently completed financial year. This information and additional information relating to the Corporation can be found on the SEDAR website at www.sedar.com and on the Corporation's website at www.sedar.com and <a href="https://wwww

Copies of the above and other disclosure documents of the Corporation may also be obtained from the Secretary of the Corporation upon request.

DIRECTORS' APPROVAL

The contents and the distribution of this Circular have been approved by the Board of Directors.

DATED the 20th day of May, 2016.

(signed) John T. Hargrove

John T. HargroveChair and Chief Executive Officer
Titan Medical Inc.

TOR01: 6313327: v5

SCHEDULE "A"

BOARD OF DIRECTORS MANDATE

Introduction

The board of directors (the "**Board**") of Titan Medical Inc. (the "**Company**") is elected by the shareholders of the Company and is responsible for the stewardship of the Company. The purpose of this mandate is to describe the principal duties and responsibilities of the Board, as well as some of the policies and procedures that apply to the Board in discharging its duties and responsibilities.

Chair of the Board of Directors

The Chair of the Board (the "Chair") will be appointed by the Board, after considering the recommendation of the Company's Corporate Governance and Nomination Committee, for such term as the Board may determine.

Independence

The Board will be comprised of a majority of independent directors, as established by applicable laws and the rules of any stock exchanges upon which the Company's securities are listed, including section 3.1 of National Policy 58-201 – *Corporate Governance Guidelines*.

Where the Chair is not independent, the independent directors may select one of their number to be appointed lead director of the Board for such term as the independent directors may determine. The Chair or lead director, if appointed, will chair regular meetings of the independent directors and assume other responsibilities that the independent directors as a whole have designated.

Role and Responsibilities of the Board

The role of the Board is to act honestly and in good faith and act in the best interest of the Company, and each member of the Board must exercise the care, diligence and skill that a reasonably prudent person would exercise in comparable circumstances. The Board is ultimately accountable and responsible for providing independent, effective leadership in supervising the management of the business and affairs of the Company.

The responsibilities of the Board include:

- adopting a strategic planning process;
- risk identification and ensuring that procedures are in place for the management of those risks;
- the Company's internal control and management information systems;
- review and approve annual operating plans and budgets;
- corporate social responsibility, ethics and integrity;
- review the integrity of the Chief Executive Officer (CEO) and the other executive officers and ensure that the CEO and other executive officers create a culture of integrity;
- succession planning, including the appointment, training and supervision of management;
- delegations and general approval guidelines for management;

- monitoring financial reporting and management;
- monitoring internal control and management information systems;
- corporate disclosure and communications including the adoption of a Corporate Disclosure Policy, which shall serve as the communication policy for the Company;
- adopting measures for receiving feedback from stakeholders;
- adopting key corporate policies designed to ensure that the Company, its directors, officers and employees
 comply with all applicable laws, rules and regulations and conduct their business ethically and with honesty
 and integrity;
- developing the Company's approach to governance; and
- such other items as required by law including the Business Corporations Act (Ontario).

Meetings of the Board will be held at least quarterly, with additional meetings to be held depending on the state of the Company's affairs and in light of opportunities or risks which the Company faces. After each meeting of the Board, the directors will meet without management being present. In addition, separate meetings of the independent directors of the Board may be held at which members of management and the non-independent directors are not present.

The Board will delegate responsibility for the day-to-day management of the Company's business and affairs to the Company's senior officers and will supervise such senior officers appropriately.

The Board may delegate certain matters it is responsible for to Board committees, presently consisting of the Audit Committee, Corporate Governance and Nominating Committee and Compensation Committee.

Strategic Planning Process and Risk Management

The Board will adopt a strategic planning process to establish objectives and goals for the Company's business and will review, approve and modify as appropriate the strategies proposed by senior management to achieve such objectives and goals. The Board will review and approve, at least on an annual basis, a strategic plan which takes into account, among other things, the opportunities and risks of the Company's business and affairs.

The Board, in conjunction with management, will identify the principal risks of the Company's business and oversee management's implementation of appropriate systems to effectively monitor, manage and mitigate the impact of such risks.

Succession Planning, Appointment and Supervision of Management

The Board will approve the succession plan for the Company, including the selection, appointment, supervision and evaluation of the CEO or any person acting in such capacity, and the other senior officers of the Company, and will also approve the compensation of the CEO or any person acting in such capacity, and the other senior officers of the Company.

In furtherance of the succession plan, the Board shall monitor senior management and oversee their training.

Delegations and Approval Authorities

The Board will delegate to the CEO, or any person acting in such capacity, senior management authority over the day-to-day management of the business and affairs of the Company.

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Corporate Disclosure and Communications

The Board will seek to ensure that all corporate disclosure complies with all applicable laws, rules and regulations and the rules and regulations of the stock exchanges upon which the Company's securities are listed and the Corporate Disclosure Policy. In addition, the Board will adopt procedures that seek to ensure the security holders have a direct contact to a designated individual in order to provide them with corporate information.

Corporate Policies

The Board will adopt and monitor compliance of the policies and procedures, which are designed to ensure that the Company, its directors, officers and employees comply with all applicable laws, rules and regulations and conduct the Company's business ethically and with honesty and integrity. Principal policies consist of:

- Code of Conduct;
- Insider Trading Policy;
- Whistleblower Policy

Review of Mandate

The Corporate Governance and Nominating Committee will annually review and assess the adequacy of this mandate and recommend any proposed changes to the Board for consideration. The Board may, from time to time, amend this Mandate.

The Board may, from time to time, permit departures from the terms of this Mandate, either prospectively or retrospectively. The terms of this Mandate are not intended to give rise to civil liability on the part of the Company or its directors or officers to shareholders, security holders, customers, suppliers, competitors, employees or other persons, or to any other liability whatsoever on their part.

Effective: February 10, 2015

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