



8th Floor, 100 University Avenue
 Toronto, Ontario M5J 2Y1
 www.computershare.com

Security Class

Holder Account Number

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Form of Proxy - ANNUAL GENERAL AND SPECIAL MEETING OF SHAREHOLDERS TO BE HELD ON MAY 29, 2019

This Form of Proxy is solicited by and on behalf of Management.

Notes to proxy

1. Every holder has the right to appoint some other person or company of their choice, who need not be a holder, to attend and act on their behalf at the meeting or any adjournment or postponement thereof. If you wish to appoint a person or company other than the persons whose names are printed herein, please insert the name of your chosen proxyholder in the space provided (see reverse).
2. If the securities are registered in the name of more than one owner (for example, joint ownership, trustees, executors, etc.), then all those registered should sign this proxy. If you are voting on behalf of a corporation or another individual you must sign this proxy with signing capacity stated, and you may be required to provide documentation evidencing your power to sign this proxy.
3. This proxy should be signed in the exact manner as the name(s) appear(s) on the proxy.
4. If this proxy is not dated, it will be deemed to bear the date on which it is mailed by Management to the holder.
5. **The securities represented by this proxy will be voted as directed by the holder, however, if such a direction is not made in respect of any matter, this proxy will be voted as recommended by Management.**
6. The securities represented by this proxy will be voted in favour or withheld from voting or voted against each of the matters described herein, as applicable, in accordance with the instructions of the holder, on any ballot that may be called for and, if the holder has specified a choice with respect to any matter to be acted on, the securities will be voted accordingly.
7. This proxy confers discretionary authority in respect of amendments or variations to matters identified in the Notice of Meeting or other matters that may properly come before the meeting or any adjournment or postponement thereof.
8. This proxy should be read in conjunction with the accompanying documentation provided by Management.

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Proxies submitted must be received by 5:00 p.m., Eastern Time, on May 27, 2019.

VOTE USING THE TELEPHONE OR INTERNET 24 HOURS A DAY 7 DAYS A WEEK!



To Vote Using the Telephone

- Call the number listed BELOW from a touch tone telephone.

1-866-732-VOTE (8683) Toll Free



To Vote Using the Internet

- Go to the following web site: www.investorvote.com
- **Smartphone?**
Scan the QR code to vote now.



To Receive Documents Electronically

- You can enroll to receive future securityholder communications electronically by visiting www.investorcentre.com and clicking at the bottom of the page.

If you vote by telephone or the Internet, DO NOT mail back this proxy.

Voting by mail may be the only method for securities held in the name of a corporation or securities being voted on behalf of another individual.

Voting by mail or by Internet are the only methods by which a holder may appoint a person as proxyholder other than the Management nominees named on the reverse of this proxy. Instead of mailing this proxy, you may choose one of the two voting methods outlined above to vote this proxy.

To vote by telephone or the Internet, you will need to provide your **CONTROL NUMBER** listed below.

CONTROL NUMBER



Appointment of Proxyholder

I/We, being holder(s) of Titan Medical Inc. hereby appoint: David McNally, OR failing him, John Barker

OR

Print the name of the person you are appointing if this person is someone other than the Management Nominees listed herein.

as my/our proxyholder with full power of substitution and to attend, act and to vote for and on behalf of the shareholder in accordance with the following direction (or if no directions have been given, as the proxyholder sees fit) and all other matters that may properly come before the Annual General and Special Meeting of shareholders of Titan Medical Inc. to be held at the Toronto Hilton Hotel, 145 Richmond Street West, Simcoe Room, Main Lobby, Toronto, Ontario, M5H 2L2 on May 29, 2019 at 12:00 p.m. (Eastern Time) and at any adjournment or postponement thereof.

VOTING RECOMMENDATIONS ARE INDICATED BY **HIGHLIGHTED TEXT** OVER THE BOXES.

1. Election of Directors

	For	Withhold		For	Withhold		For	Withhold
01. John E. Barker	<input type="checkbox"/>	<input type="checkbox"/>	02. Charles Federico	<input type="checkbox"/>	<input type="checkbox"/>	03. David J. McNally	<input type="checkbox"/>	<input type="checkbox"/>
04. Stephen Randall	<input type="checkbox"/>	<input type="checkbox"/>	05. Domenic Serafino	<input type="checkbox"/>	<input type="checkbox"/>	06. John E. Schellhorn	<input type="checkbox"/>	<input type="checkbox"/>

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For **Withhold**

2. Appointment of Auditors

Appointment of BDO Canada LLP as Auditors of the Corporation for the ensuing year and authorizing the Directors to fix their remuneration.

<input type="checkbox"/>	<input type="checkbox"/>
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For **Against**

3. Adoption of a Share Unit Plan and a Deferred Share Unit Plan

To consider, and if deemed advisable, approve an ordinary resolution for the adoption of a share unit plan (the "SU Plan") and a deferred share unit plan (the "DSU Plan") of the Corporation and the reservation of common shares for issuance pursuant to each plan.

<input type="checkbox"/>	<input type="checkbox"/>
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For **Against**

4. Amendment to the Corporation's Stock Option Plan

To consider, and if deemed advisable, approve an ordinary resolution confirming amendments to the Corporation's stock option plan, amended and restated as of March 14, 2018 (the "Option Plan" and, collectively with the SU Plan and DSU Plan, the "Compensation Plans"), to increase the number of common shares reserved for issuance pursuant to the exercise of options and other awards granted under the Compensation Plans and to increase the number of common shares that can be reserved for issuance to insiders of the Corporation at any time and issued to insiders of the Corporation in any one year period.

<input type="checkbox"/>	<input type="checkbox"/>
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For **Against**

5. Amendment to Options Issued Under the Option Plan

To consider, and if deemed advisable, approve an ordinary resolution for the amendment of the exercise prices of options granted to executive officers and other employees who are insiders of the Corporation under the Option Plan to the higher of the March 21, 2019 offering price of US\$3.40 and the five day volume-weighted average price ("VWAP") as determined as of the close of business on May 28, 2019.

<input type="checkbox"/>	<input type="checkbox"/>
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Authorized Signature(s) - This section must be completed for your instructions to be executed.

I/We authorize you to act in accordance with my/our instructions set out above. I/We hereby revoke any proxy previously given with respect to the Meeting. If no voting instructions are indicated above, this Proxy will be voted as recommended by Management.

Signature(s)

Date

DD / MM / YY

Interim Financial Statements - Mark this box if you would like to receive Interim Financial Statements and accompanying Management's Discussion and Analysis by mail.

Annual Financial Statements - Mark this box if you would like to receive the Annual Financial Statements and accompanying Management's Discussion and Analysis by mail.

If you are not mailing back your proxy, you may register online to receive the above financial report(s) by mail at www.computershare.com/maillinglist.

