

August 15, 2016

TITAN MEDICAL

Titan Medical Reports Second Quarter Financial Results and Provides SPORT Surgical System Development Update

TORONTO, ON -- (Marketwired) -- 08/15/16 -- Titan Medical Inc. (TSX: TMD)(OTCQX: TITXF), a medical device company focused on the design and development of a robotic surgical system for application in minimally invasive surgery ("MIS"), today announced financial results for the second quarter ended June 30, 2016. All financial results are reported in US dollars, unless otherwise stated. The unaudited condensed interim financial statements and management's discussion and analysis for the three and six months ended June 30, 2016 may be viewed on SEDAR at www.sedar.com.

The Company remains in the development stage and does not anticipate generating revenue until after the commercial launch of its innovative SPORT™ Surgical System. The Company's research and development expenses for the 2016 second quarter were \$7,662,739, compared with \$8,266,857 for the 2015 second quarter. The net loss for the three months ended June 30, 2016 was \$7,934,874, or \$0.05 per share, and included a gain on change in fair market value of warrants of \$800,371. The net loss for the three months ended June 30, 2015 was \$8,250,823, or \$0.08 per share, and included a gain on exchange in fair market value of warrants of \$659,554. There were 147,398,113 common shares outstanding as of June 30, 2016 as compared to 116,457,486 common shares outstanding as of December 31, 2015. At June 30, 2016, cash and cash equivalents totaled \$6,807,791 compared to \$11,197,573 at December 31, 2015.

During the 2016 second quarter, the Company continued with the development of the SPORT Surgical System and achieved its milestone for the period of initiating usability and human factor studies. More recently, the Company has been notified by its principal development suppliers that they have decided to temporarily suspend development work of the SPORT Surgical System until such time that the Company has sufficient financing to cover current and future work orders projected over a six-month period. As well, the previously announced US \$16.0 million equity investment from Shanghai JuGu Equity Investment Fund Co. Ltd. ("Shanghai JuGu") that was expected to close on June 30, 2016, and was subsequently extended to August 15, 2016, has not closed as of the date hereof. There can be no assurance that the investment from Shanghai JuGu will be completed on the terms previously announced, if at all. The Company's Board of Directors is exploring strategies to raise financing necessary to allow the Company to resume its development of the SPORT Surgical System. The Company remains committed to accomplishing its next major milestones towards achieving submission of its 510(k) application to the U.S. Food and Drug Administration ("FDA"). However, due to the suspended development work the Company's milestone and 510(k) submission timeline may need to be revised if the delay extends past the end of August.

The Company's development process is well-defined and includes completing the development of the technology as well as completing testing that will provide the results that

demonstrate substantial equivalence between the SPORT Surgical System and predicate devices. Titan's management team has worked to identify the predicate devices to which the Company must demonstrate substantial equivalence. The refined timeline to accomplish the remaining milestones incorporates our current and best analysis, as well as input from a variety of sources, to reflect recent developments in the industry. A very meticulous approach to the process is being executed and documented in preparing data for a 510(k) application.

"Our immediate focus is securing the financing to resume the development of the SPORT Surgical System so we can capitalize on what we see as an enormous marketplace opportunity," commented John Hargrove, Chief Executive Officer. "I, along with the Board of Directors, am aggressively exploring financing strategies to minimize the disruption and continue the progress we achieved over the past few months. This includes the usability and human factor studies, which we initiated in early July that focused on the ergonomics of the workstation for the surgeon, which we view as a key differentiator for the SPORT Surgical System, but also the usability of the system by everyone interacting with our technology. We also demonstrated the SPORT Surgical System at several conferences this year, including the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) conference and more recently the World Robotics Gynecology Congress. Feedback from the gynecological, gastrointestinal and endoscopic surgeon communities continues to be consistently favorable validating our technology design as well as the market's interest in adopting our innovative technology."

About Titan Medical Inc.

Titan Medical Inc. is a Canadian public company focused on the design and development of a robotic surgical system for application in MIS. The Company's SPORT™ Surgical System, currently under development, includes a surgeon-controlled robotic platform that incorporates a 3D high-definition vision system and multi-articulating instruments for performing MIS procedures through a single incision. The surgical system also includes a surgeon workstation that provides a surgeon with an advanced ergonomic interface to the robotic platform for controlling the instruments and provides a 3D high-definition endoscopic view of inside a patient's body. The SPORT™ Surgical System is designed to enable surgeons to perform a broad set of surgical procedures for general abdominal, gynecologic, and urologic indications. For more information, visit the Company's website at www.titanmedicalinc.com.

Forward-Looking Statements

This news release contains "forward-looking statements" which reflect the current expectations of management of the Company's future growth, results of operations, performance and business prospects and opportunities. Wherever possible, words such as "may", "would", "could", "will", "anticipate", "believe", "plan", "expect", "intend", "estimate", "potential for" and similar expressions have been used to identify these forward-looking statements. These statements reflect management's current beliefs with respect to future events and are based on information currently available to management. Forward-looking statements involve significant risks, uncertainties and assumptions. Many factors could cause the Company's actual results, performance or achievements to be materially different from any future results, performance or achievements that may be expressed or implied by such forward-looking statements, including, without limitation, those listed in the "Risk Factors" section of the Company's Annual Information Form dated March 30, 2016 (which

may be viewed at www.sedar.com). Should one or more of these risks or uncertainties materialize, or should assumptions underlying the forward looking statements prove incorrect, actual results, performance or achievements may vary materially from those expressed or implied by the forward-looking statements contained in this news release. These factors should be considered carefully, and prospective investors should not place undue reliance on the forward-looking statements. Although the forward-looking statements contained in the news release are based upon what management currently believes to be reasonable assumptions, the Company cannot assure prospective investors that actual results, performance or achievements will be consistent with these forward-looking statements.

CONTACT INFORMATION

Titan Medical Inc.

John Hargrove, Chief Executive Officer

(416) 548-7522 (ext. 151)

john.hargrove@titanmedicalinc.com

www.titanmedicalinc.com

EVC Group, Inc.

Amanda Prior

Aprior@evcgroup.com

(646) 445-4800

Michael Polyviou

mpolyviou@evcgroup.com

(646) 445-4800

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