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TITAN MEDICAL

Titan Medical Announces Expansion of Surgeon Advisory Board

Additions to Surgeon Advisory Board support planned clinical studies

TORONTO--(BUSINESS WIRE)-- Titan Medical Inc. (Nasdaq: TMDI; TSX: TMD), a medical device company focused on the development and commercialization of its innovative surgical technologies for robotic single access surgery, today announced changes to its Surgeon Advisory Board (SAB) comprised of industry leaders in single access and robotic-assisted surgery. The SAB will work cohesively with management to advance the company's Enos™ robotic single access surgical system through clinical studies to be performed following the approval of its planned application to the FDA for an investigational device exemption (IDE), and, upon regulatory clearance, realize the vision of improving patient outcomes.

"We are proud to announce the new members of our Surgeon Advisory Board, and to be working closely with scientific and clinical luminaries in the field of single access and robotic-assisted surgery. The prestigious group of thought leaders we have assembled will assist Titan by providing insights and guidance as we prepare for human clinical studies," said David McNally, President and CEO of Titan Medical. "We look forward to working closely with this exceptional group of surgeons as they are uniquely qualified to guide the further development of effective surgeon training programs that will facilitate safe use, and upon regulatory clearance, broaden adoption of our innovative Enos robotic single access system."

Mr. McNally continued, "We are grateful for the many contributions of previous SAB advisors including Drs. Eduardo Parra-Davila, Lee Swanstrom, John Valvo and Bruce Wolff who previously provided expert guidance in assessing subspecialties and a broad array of procedural applications outside of our initial targeted indication of use in gynecologic surgery. They have assisted in confirming the potential for broad application of the Enos system in other subspecialties in the future."

In the last year, Titan has made key appointments to its Board of Directors and executive team, expanded its technology solution development and manufacturing capabilities, and bolstered its infrastructure to further position itself as an innovation leader in robotic single access surgery. The SAB further advances its vision to deliver innovative solutions that have a positive impact for patients, surgeons and hospital settings of multiple sizes.

Titan Medical's SAB members (in alphabetical order):

Arnold Advincula, MD, Professor & Vice-Chair of Women's Health as well as Chief of Gynecology at the Sloane Hospital for Women, New York Presbyterian Hospital/Columbia University Medical Center, brings more than 20 years of clinical expertise. He is a board-certified obstetrician-gynecologist and a Fellow of the American College of Surgeons. After graduating with honors from Temple University School of Medicine in Philadelphia, Dr. Advincula completed both an OB/GYN residency and a Minimally Invasive Surgery fellowship at the University of North Carolina-Chapel Hill. Formerly, he was Professor of Obstetrics and Gynecology, Director of the Minimally Invasive Surgery Division and Fellowship, and Director of the Endometriosis Center at the University of Michigan. More recently, he was Director of the Center for Specialized Gynecology and Director of the Education Institute at the Nicholson Center, an advanced medical and surgical simulation training facility at Florida Hospital Celebration Health. He has served as President of the American Association of Gynecologic Laparoscopy, an 8,000-member organization promoting minimally invasive surgery worldwide, from 2014 to 2016.

Ricardo Estape, MD, is board certified in Obstetrics and Gynecology and in Gynecologic Oncology. He attended medical school at the University of Pennsylvania and completed his residency in Obstetrics and Gynecology as well as his fellowship in Gynecologic Oncology at the University of Miami/Jackson Memorial Hospital Program in Miami, Florida. He was an Associate Professor in Gynecologic Oncology and became the Director of the Gynecologic Oncology Site Group for the Sylvester Cancer Center at the University of Miami until he went into private practice in South Miami in 2002. Dr. Estape is a member of the Society of Gynecologic Oncology, a fellow of the American College of Obstetrics and Gynecology, a member of the American Association of Gynecologic Laparoscopists, member of the Society of Laparoendoscopic Surgeons, and a member of Alpha Omega Alpha Medical Honor Society.

J. Scott Magnuson, MD, FACS, is a board-certified otolaryngologist - head and neck surgeon and a pioneer in the field of robotic surgery for the head and neck. He possesses advanced training in robotic-assisted surgery and is a leading authority on Transoral Robotic Surgery whose areas of expertise include advanced head and neck surgery, tumor removal, skin cancer surgery, sleep apnea surgery, airway surgery, thyroid and parathyroid surgery, reconstructive surgery and voice and swallowing disorders. Dr. Magnuson is the founder of AdventHealth Medical Group's elite ear, nose and throat surgical team. He is also Chief Medical Officer of the AdventHealth Nicholson Center, one of the leading surgical education centers in the world, with a specific focus and expertise in robotic surgical devices and procedures. His credentials include his medical degree earned at the University of Texas Medical School in Houston as well as his internship in general surgery and otolaryngology residency at the University of Alabama at Birmingham.

Arleen H. Song, MD, MPH, is currently an Assistant Professor in the Division of Minimally Invasive Gynecologic Surgery in the Department of Obstetrics and Gynecology at Duke University. She is board certified in obstetrics and gynecology. She received her medical degree from University of North Carolina at Chapel Hill School of Medicine and completed her OB/GYN residency and minimally invasive gynecologic surgery fellowship at the University of Michigan. She remained on faculty at the University of Michigan in the Division of Minimally Invasive Gynecologic Surgery during which time she was a faculty preceptor for

fellows and served as Director of Clinical Services for the MIGS division. She is a long time member of the American Association of Gynecologic Laparoscopists (AAGL) and served as Chair of the AAGL robotic special interest group.

Kevin J.E. Stepp, MD, FACOG, FPMRS, is the Director of Urogynecology and Pelvic Surgery at one of the nation's largest hospital systems in the country: Atrium Health in Charlotte, North Carolina. Dr. Stepp completed his residency in Obstetrics and Gynecology at MetroHealth/ Cleveland Clinic. He then completed a 3-year, combined fellowship in Minimally Invasive Surgery and Urogynecology/Pelvic Reconstructive Surgery at the Cleveland Clinic in Cleveland, Ohio. In 2010 he relocated to Charlotte to establish a combined surgical division in Urogynecology and Minimally Invasive Surgery. Under his leadership, the division has grown to one of the busiest surgical programs in the country and become a highly sought-after fellowship in Urogynecology and Reconstructive Surgery. Dr. Stepp is a member of the American Urogynecologic Society, the American College of Obstetrics and Gynecologists and the American Association of Gynecologic Laparoscopists.

About Titan Medical

Titan Medical Inc. (Nasdaq: TMDI; TSX: TMD), a medical device company headquartered in Toronto, Ontario and with R&D facilities in Chapel Hill, North Carolina, is focused on enhancing robotic assisted surgery using innovative technology through a single access point. The Enos™ robotic single access surgical system is being developed with an ergonomic focus to provide a surgical experience that imitates real-life movements that surgeons demand and includes multi-articulating instruments designed to allow surgeons an increased range of motion in a confined space, with dexterity and the ability to exert the forces necessary to complete common surgical tasks. With the Enos system, Titan intends to initially pursue gynecologic surgical indications. Certain aspects of Titan's robotic assisted surgical technologies and related intellectual property have been licensed to Medtronic plc, while retaining world-wide rights to commercialize the technologies for use with the Enos system.

Enos™ is a trademark of Titan Medical Inc.

For more information, visit www.titanmedicalinc.com.

Forward-Looking Statements

This news release contains "forward-looking statements" within the meaning of applicable Canadian and U.S. securities laws. Such statements reflect the current expectations of management of the company's future growth, results of operations, performance and business prospects and opportunities. Forward-looking statements are frequently, but not always, identified by words such as "may", "would", "could", "will", "anticipate", "believe", "plan", "expect", "intend", "estimate", "potential for" and similar expressions, although these words may not be present in all forward-looking statements. Forward-looking statements that appear in this release may include, without limitation, references to: the company's focus on the design and development of surgical technologies for robotic single access surgery; the company's clinical studies to be performed following the approval of its planned application to the FDA for an IDE; the assistance of the SAB members in providing insights and guidance in preparation for human clinical studies; the company's intention to initially pursue gynecologic surgical indications with the Enos system; the future application of the Enos system in other subspecialties, outside gynecologic surgery; and the license of certain of Titan's robotic assisted surgical technologies and related intellectual property to Medtronic plc, while retaining world-wide rights to commercialize the technologies for use with the Enos system. 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 and Form 40-F for the fiscal year ended December 31, 2020 (which may be viewed at www.sedar.com and at www.sec.gov). 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. Except as required by law, the company expressly disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise.

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