UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 OR 15(d) of The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **July 6, 2022**

DIAMEDICA THERAPEUTICS INC.

(Exact name of registrant as specified in its charter)

British Columbia	**001-36291**	**Not Applicable**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

Two Carlson Parkway, Suite 260 **Minneapolis, Minnesota**	**55447**
(Address of principal executive offices)	(Zip Code)

(763) 312-6755
(Registrant's telephone number, including area code)

Not Applicable
(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Voting common shares, no par value per share	DMAC	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

Item 8.01 Other Events.

On July 6, 2022, DiaMedica Therapeutics Inc. (the "Company") announced that the U.S. Food and Drug Administration (FDA) has placed a clinical hold on the Company's Phase 2/3 ReMEDy2 trial studying the use of the Company's product candidate, DM199, to treat acute ischemic stroke (AIS) patients. The clinical hold was initiated following the Company's pause in patient enrollment and submission of three serious adverse event reports to the FDA related to clinically significant, transient hypotension (low blood pressure) occurring shortly after initiation of the intravenous (IV) dose of DM199. The blood pressure levels of the three patients recovered back to their baseline blood pressure within minutes after IV infusion was stopped.

The Company may not enroll any additional patients in the ReMEDy2 trial until the Company provides the FDA with the Company's analysis of the events leading to or causing the hypotension, its suggested protocol modifications to address the mitigation of these events, its rationale and supporting data for the protocol modifications, and the FDA notifies the Company that it may resume enrollment in the clinical trial. Based on information received to date, DiaMedica believes that proportionate reductions in the DM199 dose level and IV infusion times will effectively mitigate the hypotension issue in ReMEDy2 patients. The Company plans to submit a revised ReMEDy2 trial protocol with the supporting rationale and data to the FDA for review in the coming weeks.

A press release announcing the clinical hold is attached as Exhibit 99.1 to this Current Report on Form 8-K and incorporated herein by reference.

Cautionary Note Regarding Forward-Looking Statements

This Current Report on Form 8-K and the press release announcing the clinical hold contains forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 and forward-looking information that are based on the beliefs of management and reflect management's current expectations. When used in this Current Report on Form 8-K, the words "estimate," "believe," "anticipate," "intend," "expect," "plan," "continue," "potential," "will," "may" or "should," the negative of these words or such variations thereon or comparable terminology and the use of future dates are intended to identify forward-looking statements and information. The forward-looking statements and information in this Current Report on Form 8-K and the press release include statements regarding the Company's beliefs as to the issues raised in the FDA's clinical hold letter, and the causes of and its plans and ability to address the deficiencies identified in the clinical hold letter, the timeframe for doing so, and future changes to the ReMEDy2 trial protocol; the anticipated clinical benefits and success of DM199, the timing and requirements of its clinical programs, including its Phase 2/3 trial for DM199 in patients with AIS, which the Company believes has the potential to serve as a pivotal registration study of DM199 in that patient population; the potential for each of the two separate independent primary endpoints to be the basis for regulatory approval of DM199 for the treatment of AIS, anticipated clinical results and ability to achieve clinical and other milestones and its goal of offering a treatment option for patients who suffer from AIS. Such statements and information reflect management's current view and the Company undertakes no obligation to update or revise any of these statements or information. By their nature, forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements, or other future events, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Applicable risks and uncertainties include, among others, the risk that the Company may not be able to address successfully the concerns identified in the clinical hold letter or may require the Company to collect additional data or information beyond what it currently expects; the risk that the Company may not be able to lift the clinical hold or do so in a timely manner; uncertainties relating to regulatory applications and related filing and approval timelines, including the risk that FDA may not remove the clinical hold on the ReMEDy2 trial; the possibility of additional future adverse events associated with or unfavorable results from the ReMEDy2 trial; the possibility of unfavorable results from the Company's clinical trials of DM199; the risk that existing preclinical and clinical data may not be predictive of the results of ongoing or later clinical trials; the Company's plans to develop, obtain regulatory approval for and commercialize its DM199 product candidate for the treatment of AIS and chronic kidney disease and its expectations regarding the benefits of DM199; the Company's ability to conduct successful clinical testing of DM199 and within its anticipated parameters, enrollment numbers, costs and timeframes; the adaptive design of the ReMEDy2 trial and the possibility that the targeted enrollment and other aspects of the trial could change depending upon certain factors, including additional input from the FDA and the blinded interim analysis; the perceived benefits of DM199 over existing treatment options; the potential direct or indirect impact of the COVID-19 pandemic, hospital and medical facility staffing shortages, and worldwide global supply chain shortages on the Company's business and clinical trials, including its ability to meet its site activation and enrollment goals; the Company's reliance on collaboration with third parties to conduct clinical trials; the Company's ability to continue to obtain funding for its operations, including funding necessary to complete planned clinical trials and obtain regulatory approvals for DM199 for AIS and chronic kidney disease, and the risks identified under the heading "Risk Factors" in the Company's annual report on Form 10-K for the fiscal year ended December 31, 2021 and subsequent U.S. Securities and Exchange Commission filings. The forward-looking information contained in this Current Report on Form 8-K represents the expectations of the Company as of the date of this Current Report on Form 8-K and, accordingly, is subject to change after such date. Readers should not place undue importance on forward-looking information and should not rely upon this information as of any other date. While the Company may elect to, it does not undertake to update this information at any particular time except as required in accordance with applicable laws.

Item 9.01 Financial Statements and Exhibits.

(d) *Exhibits*.

Exhibit No.	Description
99.1	Press Release dated July 6, 2022 announcing clinical hold on ReMEDy2 trial
104	The cover page from this Current Report on Form 8-K, formatted in Inline XBRL

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

DIAMEDICA THERAPEUTICS INC.

By: /s/ Scott Kellen
Scott Kellen
Chief Financial Officer and Secretary

Dated: July 6, 2022

Exhibit 99.1

DiaMedica Therapeutics Announces Clinical Hold of its Phase 2/3 ReMEDy2 Clinical Trial for DM199

Minneapolis, Minnesota – **July 6, 2022 (Business Wire)** – DiaMedica Therapeutics Inc. (Nasdaq: DMAC), a clinical-stage biopharmaceutical company focused on developing novel treatments for neurological disorders and kidney diseases, today announced that the U.S. Food and Drug Administration (FDA) has placed a clinical hold on the Company's Phase 2/3 ReMEDy2 trial studying the use of the Company's product candidate, DM199, to treat acute ischemic stroke (AIS) patients. The clinical hold was initiated following the Company's pause in patient enrollment and submission of three serious adverse event reports to the FDA related to clinically significant, transient hypotension (low blood pressure) occurring shortly after initiation of the intravenous (IV) dose of DM199. The blood pressure levels of the three patients recovered back to their baseline blood pressure within minutes after IV infusion was stopped.

The Company believes that the adverse events resulted from switching to an IV bag formulated from different materials in the ReMEDy2 trial compared to the IV bag used in the prior Phase 2 ReMEDy1 trial. Due to supply issues, the type of IV bag used in the ReMEDy1 trial was not available in many U.S. hospitals, and accordingly after routine compatibility testing, a different type of IV bag was selected for use in the ReMEDy2 trial. As part of the Company's evaluation of the events that lead to these hypotensive events, the Company is confirming the differences in drug absorption in the IV bags used in the ReMEDy1 trial compared to the ReMEDy2 trial and plans to work with the FDA to modify the ReMEDy2 trial protocol to adjust the DM199 IV dosing to more closely match the dosing in the ReMEDy1 trial, taking into account these differences. The Company notes that no such hypotension issues were reported in its ReMEDy1 trial in which 46 stroke patients received DM199.

The Company may not enroll any additional patients in the ReMEDy2 trial until the Company provides the FDA with the Company's analysis of the events leading to or causing the hypotension, its suggested protocol modifications to address the mitigation of these events, its rationale and supporting data for the protocol modifications, and the FDA notifies the Company that it may resume enrollment in the clinical trial. Based on information received to date, DiaMedica believes that proportionate reductions in the DM199 dose level and IV infusion times will effectively mitigate the hypotension issue in ReMEDy2 patients. The Company plans to submit a revised ReMEDy2 trial protocol with the supporting rationale and data to the FDA for review upon completion of its compatibility analysis.

Kirsten Gruis, M.D., Chief Medical Officer of DiaMedica, noted that "Patient safety is very important as we plan and conduct our clinical studies. Patient blood pressure is easily and routinely monitored in stroke patients which is why our study sites were able to quickly identify the issue and immediately stop the dosing of DM199, after which the patients then recovered within minutes and suffered no injuries. We are committed to working diligently with the FDA to resolve this issue and resume the trial as soon as reasonably practicable."

"While having to pause enrollment in the ReMEDy2 trial was not desirable, we remain confident about the future potential of DM199 and are committed to refining the dosing procedures and methods that will further enhance patient safety," commented Rick Pauls, DiaMedica's President and Chief Executive Officer. "We also take comfort in that the transient hypotension observed is yet another clinical indicator that DM199 may be biologically active in stroke patients and may provide a meaningful improvement in stroke outcomes."

About ReMEDy2 Trial

The ReMEDy2 trial is an adaptive design, randomized, double-blind, placebo-controlled trial studying the use of the Company's product candidate, DM199, to treat AIS patients. The trial is intended to enroll approximately 350 patients at 75 sites in the United States. Patients enrolled in the trial will be treated for three weeks with either DM199 or placebo, beginning within 24 hours of the onset of AIS symptoms, with the final follow-up at 90 days. The trial excludes patients treated with tissue plasminogen activator (tPA) and/or mechanical thrombectomy. The study population is representative of the approximately 80% of AIS patients who do not have treatment options today, primarily due to the limitations on treatment with tPA or mechanical thrombectomy. DiaMedica believes that the proposed trial has the potential to serve as a pivotal registration study of DM199 in this patient population.

The ReMEDy2 trial has two separate, independent, primary endpoints based upon both the results observed in the first ReMEDy1 phase 2 trial and published results from the urine-derived form of KLK1 used to successfully treat AIS in China. ReMEDy2 is powered for success with either endpoint: 1) physical recovery from stroke as measured by the well-established modified Rankin Scale (mRS) at day 90, and 2) the rate of ischemic stroke recurrence through day 90. Recurrent strokes represent 25% of all ischemic strokes, often occurring in the first few weeks after an initial stroke and are typically more disabling, costly, and fatal than initial strokes.

About DM199

DM199 is a recombinant (synthetic) form of human tissue kallikrein-1 (KLK1). KLK1 is a serine protease (protein) that plays an important role in the regulation of diverse physiological processes including blood flow, blood pressure, inflammation, fibrosis, oxidative stress and neurogenesis via a molecular mechanism that increases production of nitric oxide and prostaglandin. KLK1 deficiency may play a role in multiple vascular and fibrotic diseases such as stroke, chronic kidney disease, retinopathy, vascular dementia, and resistant hypertension where current treatment options are limited or ineffective. DiaMedica is the first company to have developed a recombinant form of the KLK1 protein. KLK1 protein, produced from porcine pancreas and human urine, has been used to treat patients in Japan, China and South Korea for decades. In September 2021, the FDA granted Fast Track Designation to DM199 for the treatment of acute ischemic stroke.

About DiaMedica Therapeutics Inc.

DiaMedica Therapeutics Inc. is a clinical stage biopharmaceutical company committed to improving the lives of people suffering serious diseases. Its lead candidate, DM199, is the first pharmaceutically active recombinant (synthetic) form of the KLK1 protein, an established therapeutic modality for the treatment of acute ischemic stroke and chronic kidney disease . For more information visit the Company's website at www.diamedica.com.

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