As filed with the Securities and Exchange Commission on August 11, 2026.

Registration No.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549

Form S-8

REGISTRATION STATEMENT UNDER THE
SECURITIES ACT OF 1933

DIAMEDICA THERAPEUTICS INC.

(Exact Name of Registrant as Specified in its Charter)

British Columbia, Canada	**Not Applicable**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
301 Carlson Parkway, Suite 210 **Minneapolis, Minnesota**	**55305**
(Address of Principal Executive Offices)	(Zip Code)

DiaMedica Therapeutics Inc.
Amended and Restated 2019 Omnibus Incentive Plan
(Full Title of the Plan)

Rick Pauls
President and Chief Executive Officer
DiaMedica Therapeutics Inc.
301 Carlson Parkway, Suite 210
Minneapolis, Minnesota 55305
(Name and Address of Agent for Service)

Telephone number, including area code, of agent for service: **(763) 496-5454**

Copies to:

Jonathan R. Zimmerman
Joshua L. Colburn
Faegre Drinker Biddle & Reath LLP
2200 Wells Fargo Center
90 South Seventh Street
Minneapolis, Minnesota 55402-3901

Keith Inman
Pushor Mitchell LLP
301 - 1665 Ellis Street
Kelowna, British Columbia
Canada
V1Y 2B3

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer ☐
Non accelerated Filer ☒

Accelerated Filer ☐
Smaller Reporting Company ☒
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 7(a)(2)(B) of the Securities Act. ☐

DIAMEDICA THERAPEUTICS INC.

EXPLANATORY NOTE

This Registration Statement on Form S-8 (the "Registration Statement") of DiaMedica Therapeutics Inc. (the "Registrant" or the "Company") is being filed pursuant to General Instruction E to Form S-8 under the United States Securities Act of 1933, as amended (the "Securities Act"), to register an additional 3,500,000 voting common shares, no par value per share, of the Company (the "Common Shares") available for issuance under the DiaMedica Therapeutics Inc. Amended and Restated 2019 Omnibus Incentive Plan (the "2019 Plan"). The share increase was approved by the Company's Board of Directors on March 16, 2026 and by the Company's shareholders at the Company's 2026 Annual General Meeting of Shareholders held on May 20, 2026. On May 23, 2024, the Company filed with the United States Securities and Exchange Commission (the "SEC") a Registration Statement on Form S-8 (File No. 333-279710) (the "2024 Registration Statement") to register an additional 3,000,000 Common Shares available for issuance under the 2019 Plan. On August 11, 2022, the Company filed with the SEC a Registration Statement on Form S-8 (File No. 333-266789) (the "2022 Registration Statement") to register an additional 2,000,000 Common Shares available for issuance under the2019 Plan. On May 23, 2019, the Company filed with the SEC a Registration Statement on Form S-8 (File No. 333-231717) (the "2019 Registration Statement" and, together with the 2022 Registration Statement and 2024 Registration Statement, the "Prior Registration Statements") to register the initial 2,000,000 Common Shares available for issuance under the DiaMedica Therapeutics Inc. 2019 Omnibus Incentive Plan. The contents of the Prior Registration Statements, with the exception of Items 3, 6 and 8 of Part II of such Prior Registration Statements, are hereby incorporated by reference.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The Company hereby incorporates by reference into this Registration Statement the following documents which have been previously filed (not furnished) with the SEC:

(a) The Company's Annual Report on Form 10-K for the year ended December 31, 2025;

(b) The Company's Quarterly Reports on Form 10-Q for the quarters ended March 31, 2026 and June 30, 2026;

(c) The Company's Current Reports on Form 8-K (other than portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits accompanying such reports that are related to such items) filed with the SEC on March 31, 2026, May 6, 2026 and May 21, 2026;

(d) All other reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the annual report referred to in (a) above (other than information deemed to have been "furnished" rather than "filed" in accordance with the Commission's rules); and

(e) The description of the Company's Common Shares which is contained in Exhibit 4.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 2025 and any amendment or report filed for the purpose of updating such description.

In addition, all other documents filed (not furnished) by the Company pursuant to Section 13(a), Section 13(c), Section 14 or Section 15(d) of the Securities Exchange Act of 1934, as amended, on or after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement that indicates that all securities offered hereby have been sold or that deregisters all securities then remaining unsold shall be deemed to be incorporated in this Registration Statement by reference and to be a part of this Registration Statement from the date of filing of such documents; provided, however, that documents or information deemed to have been furnished to and not filed with the SEC in accordance with the rules of the SEC shall not be deemed incorporated by reference into this Registration Statement.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any subsequently filed document which also is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 6. Indemnification of Directors and Officers.

British Columbia Law

Under Section 160 of the British Columbia Business Corporations Act (BCBCA), the Company may indemnify an eligible party including, but not limited to, a current or former director or officer of the Company; a current or former director or officer of another corporation: (i) at a time when the corporation is or was an affiliate of the Company, or (ii) at the Company's request; or, an individual who, at the Company's request, is or was, or holds or held, a position equivalent to that of a director or officer of a partnership, trust, joint venture or other unincorporated entity against all judgments, penalties or fines awarded or imposed in, or an amount paid in settlement of a proceeding in which an eligible party or any of the heirs and personal or other legal representatives of the eligible party, by reason of such party having been a director or officer of, or holding or having held a position equivalent to that of a director or officer of, the Company or an associated corporation, to which such party is or may be liable. Indemnification will be prohibited under Section 163 of the BCBCA if (i) giving the indemnity or paying the expenses is or was prohibited by the Company's Articles, (ii) if in relation to the subject matter of the eligible proceeding, the eligible party did not act honestly and in good faith with a view to the best interests of the Company or the associated corporation, as the case may be, or (iii) in the case of an eligible proceeding other than a civil proceeding, if the eligible party did not have reasonable grounds for believing that the eligible party's conduct in respect of which the proceeding was brought was lawful. The BCBCA also provides, under Section 162, that the Company may also advance moneys to an eligible party for expenses actually and reasonably incurred in connection with such a proceeding; however, prior to making any such advance, the Company must receive from the eligible party a written undertaking that if it is ultimately determined that the payment of expenses is prohibited by either conditions (i), (ii) or (iii) above, the eligible party will repay the amounts advanced.

DiaMedica's Articles

The Company's Articles provide that the Company shall indemnify, and pay expenses either as they are incurred in advance of the final disposition of an eligible proceeding or after the final disposition of an eligible proceeding of, a current or former director, and his or her heirs and legal personal representatives, or any person designated by the Company, in accordance with, and to the fullest extent and in all circumstances permitted by, the BCBCA.

The foregoing description of the Company's Articles is only a summary and is qualified in its entirety by the full text of the foregoing.

Indemnification Agreements

The Company has entered into and, in the future, will enter into indemnification agreements with its officers and directors in respect of any legal claims or actions initiated against them in their capacity as officers and directors of the Company or its subsidiaries in accordance with applicable law. These agreements include bearing the reasonable cost of legal representation in any legal or regulatory action in which they may become involved in their capacity as the Company's officers and directors. Pursuant to such indemnities, the Company will bear the cost of the representation of certain officers and directors.

Insurance Policies

The Company maintains insurance for certain liabilities incurred by the Company's directors and officers in their capacity with the Company or its subsidiaries.

SEC's Position on Indemnification

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling the Company pursuant to the foregoing provisions, the Company has been informed that in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable.

Item 8. Exhibits.

Exhibit No.	Description of Exhibit
4.1	Notice of Articles of DiaMedica Therapeutics Inc. dated May 20, 2025 (incorporated by reference to DiaMedica's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2025)
4.2	Amended and Restated Articles of DiaMedica Therapeutics Inc. Effective May 17, 2023 (incorporated by reference to Exhibit 3.1 to DiaMedica's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 18, 2023)
5	Opinion of Pushor Mitchell LLP (filed herewith)
23.1	Consent of Baker Tilly US, LLP (filed herewith)
23.2	Consent of Pushor Mitchell LLP (included in Exhibit 5.1)
24.1	Powers of Attorney (included on signature page)
99	DiaMedica Therapeutics Inc. Amended and Restated 2019 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.1 to DiaMedica's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2026)
107	Filing Fee Table (filed herewith)

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Minneapolis, State of Minnesota, on August 11, 2026.

DIAMEDICA THERAPEUTICS INC.

By: /s/ Rick Pauls
Rick Pauls
President and Chief Executive Officer

POWERS OF ATTORNEY

Each person whose signature appears below hereby constitutes and appoints Rick Pauls and Scott Kellen, and each of them acting individually, as his or her true and lawful attorneys-in-fact and agents, with full power of each to act alone, with full powers of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign the Registration Statement filed herewith and any and all amendments to said Registration Statement (including post-effective amendments), and file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, with full power of each to act alone, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or his or their substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

Signature	Title	Date
/s/ Rick Pauls Rick Pauls	President, Chief Executive Officer and Director (principal executive officer)	August 11, 2026
/s/ Scott Kellen Scott Kellen	Chief Financial Officer and Secretary (principal financial and accounting officer)	August 11, 2026
/s/ Michael Giuffre, M.D. Michael Giuffre, M.D.	Director	August 11, 2026
/s/ Richard Kuntz, M.D. Richard Kuntz, M.D.	Director	August 11, 2026
/s/ Tanya N. Lewis Tanya N. Lewis	Director	August 11, 2026
/s/ Daniel O'Connor Daniel O'Connor	Director	August 11, 2026
/s/ James Parsons James Parsons	Chairman of the Board, Director	August 11, 2026
/s/ Charles Semba, M.D. Charles Semba, M.D.	Director	August 11, 2026

Exhibit 5.1

PUSHOR MITCHELL LAWYERS

August 11, 2026

DiaMedica Therapeutics Inc.
Suite 210, 301 Carlson Parkway
Minneapolis, Minnesota 55305

Dear Sirs/Mesdames:

Re: DiaMedica Therapeutics Inc. – Registration Statement on Form S-8

We have acted as special Canadian counsel for DiaMedica Therapeutics Inc., a corporation governed under the laws of British Columbia (the "**Corporation**") in connection with its preparation and filing with the Securities and Exchange Commission of a Registration Statement on Form S-8 (the "**Registration Statement**"), under the Securities Act of 1933, as amended (the "**Securities Act**"), relating to the registration of 3,500,000 voting common shares, no par value per share, of the Corporation (the "**Shares**") issuable under the DiaMedica Therapeutics Inc. Amended and Restated 2019 Omnibus Incentive Plan (as amended and restated, the "**Plan**").

We have examined copies of such corporate records of the Corporation and we have considered such questions of law and examined such statutes, regulations and orders, certificates and other documents as we consider necessary and relevant as the basis for the opinion set forth herein.

We are solicitors qualified to practice law in the Province of British Columbia (the "**Province**"). This opinion is rendered solely with respect to the laws of the Province and we express no opinion as to any laws or matters governed by any laws other than the laws of the Province.

For purposes of rendering the opinions expressed herein, we have assumed:

(a) the genuineness of all signatures on documents, agreements and certificates;

(b) the authenticity and completeness of all original documents examined by us and the conformity to authentic original documents of all certified copies, photocopies and facsimiles examined by us;

(c) that the Corporation is, and at all relevant times has been, in compliance with applicable laws; and

(d) the minute books of the Corporation provided to us contain all constating documents of the Corporation and are a complete record of the minutes and resolutions of the directors and shareholders of the Corporation.

We have made no independent investigation of the foregoing assumptions.

PUSHOR MITCHELL LLP
301-1665 Ellis Street, Kelowna, BC, Canada, V1Y 2B3
Ph: (250) 762-2108 Fax: (250) 762-9115

We express no opinion with respect to any filings, proceedings, permits, consents, orders or authorizations which may be required in connection with the issuance of the Shares.

Whenever our opinion refers to securities of the Corporation issued as being "fully paid and non-assessable", such opinion indicates that the holder of such securities cannot be required to contribute any further amounts to the Corporation by virtue of its status as holder of such securities, either in order to complete payment for the securities, to satisfy claims of creditors or otherwise. No opinion is expressed as to actual receipt by the Corporation of the consideration for the issuance of such securities or as to the adequacy of any consideration received.

Based upon and subject to the assumptions and qualifications herein expressed, we are of the opinion that when issued in accordance with the requirements of law and the Plan (and the agreements and awards duly adopted thereunder and in accordance therewith), the Shares will be validly issued as fully paid and non-assessable common shares in the capital of the Corporation.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to any references to this firm in any prospectus contained therein. In giving this consent, we do not admit that we are experts within the meaning of Section 11 of the Securities Act or within the category of persons whose consent is required by Section 7 of the Securities Act.

This opinion is limited to the matters stated herein, and no opinion or belief is implied or may be inferred beyond the matters expressly stated herein. This opinion is given as of the date hereof and we disclaim any obligation or undertaking to advise you of any change in law or fact affecting or bearing upon this opinion occurring after the date hereof which may come or be brought to our attention.

Yours truly

/s/ Pushor Mitchell LLP

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in this Registration Statement on Form S-8 of DiaMedica Therapeutics Inc. (the "Company") of our report dated March 30, 2026, relating to the consolidated financial statements of the Company, appearing in the Annual Report on Form 10-K of the Company for the year ended December 31, 2025, filed with the Securities and Exchange Commission.

/s/ Baker Tilly US, LLP

Minneapolis, Minnesota
August 11, 2026

Calculation of Filing Fee Tables

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DiaMedica Therapeutics Inc.

Table 1: Newly Registered Securities

	Security Type	Security Class Title	Fee Calculation Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
1	Equity	Common Shares, no par value	Other	3,500,000	$ 6.615	$ 23,152,500.00	0.0001381	$ 3,197.36
				Total Offering Amounts:		$ 23,152,500.00		$ 3,197.36
				Total Fee Offsets:				$ 0.00
				Net Fee Due:				$ 3,197.36

Offering Note

1

Amount Registered represents common shares, no par value ("Common Shares"), issuable pursuant to the DiaMedica Therapeutics Inc. Amended and Restated 2019 Omnibus Incentive Plan (the "Plan").

Pursuant to Rule 416(c) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement also covers any additional Common Shares that become issuable under the Plan by reason of any stock split, stock dividend or other similar transaction effected without the receipt of consideration that results in an increase in the number of outstanding Common Shares.

Proposed Maximum Offering Price Per Unit and resulting Maximum Aggregate Offering Price estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(c) and Rule 457(h) of the Securities Act, based on the average of the high and low prices per Common Share on August 4, 2026, as reported by The Nasdaq Stock Market LLC.

Table 2: Fee Offset Claims and Sources ☑Not Applicable

		Registrant or Filer Name	Form or Filing Type	File Number	Initial Filing Date	Filing Date	Fee Offset Claimed	Security Type Associated with Fee Offset Claimed	Security Title Associated with Fee Offset Claimed	Unsold Securities Associated with Fee Offset Claimed	Unsold Aggregate Offering Amount Associated with Fee Offset Claimed	Fee Paid with Fee Offset Source
Rule 457(p)												
Fee Offset Claims												
Fee Offset Sources												