PROSPECTUS SUPPLEMENT

(To Prospectus dated October 9, 2024)

\$200,000,000



Dianthus Therapeutics, Inc.

Common Stock

We have entered into a sales agreement (the "Sales Agreement") with TD Securities (USA) LLC ("TD Cowen"), relating to shares of our common stock, par value \$0.001 per share ("common stock"), offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of the Sales Agreement, we may offer and sell shares of our common stock having an aggregate offering price of up to \$200,000,000 from time to time through or to TD Cowen acting as our sales agent.

Our common stock is traded on The Nasdaq Capital Market under the symbol "DNTH." The last reported sales price of our common stock on the Nasdaq Capital Market on September 26, 2024 was \$27.02.

Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus will be made through a sale that is deemed to be an "at the market offering" as defined in Rule 415(a)(4) under the Securities Act of 1933, as amended (the "Securities Act"). TD Cowen is not required to sell any specific amount of our common stock but will act as our sales agent using commercially reasonable efforts, consistent with its normal trading and sales practices, on mutually agreed terms between TD Cowen and us. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

The compensation to TD Cowen for sales of common stock sold pursuant to the Sales Agreement will be an amount up to 3.0% of the aggregate gross proceeds of any shares of common stock sold under the Sales Agreement. In connection with the sale of our common stock on our behalf, TD Cowen will be deemed to be an "underwriter" within the meaning of the Securities Act, and the compensation of TD Cowen will be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to TD Cowen with respect to certain liabilities, including liabilities under the Securities Act or the Securities Exchange Act of 1934, as amended (the "Exchange Act"). See "Plan of Distribution" beginning of page S-14 for additional information regarding the compensation for TD Cowen.

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described under the heading "Risk Factors" on page S-9 of this prospectus supplement and in the accompanying prospectus, as well as those contained in the other documents that are incorporated by reference and any related free writing prospectus. You should carefully read this entire prospectus supplement and the accompanying prospectus, including any information incorporated by reference, before deciding whether to purchase shares of our common stock.

Neither the U.S. Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

TD Cowen

The date of this prospectus supplement is October 11, 2024.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement is part of a registration statement on Form S-3 that we filed with the U.S. Securities and Exchange Commission (the "SEC"), using a "shelf" registration process. Under this shelf registration, we may, from time to time, sell common stock and other securities having an aggregate offering price of up to \$500,000,000. Under this prospectus supplement, we may offer shares of our common stock having an aggregate offering price of up to \$200,000,000 from time to time at prices and on terms to be determined by market conditions at the time of offering.

This document contains two parts: this prospectus supplement, which provides you with specific information about this offering, and the accompanying prospectus, which provides more general information, some of which may not apply to this offering. Generally, when we refer only to the "prospectus," we are referring to both parts combined. This prospectus supplement may add, update or change information contained in the accompanying prospectus. To the extent that any statement we make in this prospectus supplement is inconsistent with statements made in the accompanying prospectus, or any documents incorporated by reference, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying prospectus, including the documents incorporated by reference therein. Information in any document we subsequently file that is incorporated by reference shall modify or supersede the information in this prospectus supplement, the accompanying prospectus and documents incorporated by reference prior to such subsequent filing. It is important for you to read and consider all information contained in this prospectus supplement and the accompanying prospectus, including the documents we have referred you to in the section entitled "Where You Can Find Additional Information" below in this prospectus supplement.

We are responsible for the information contained and incorporated by reference in this prospectus supplement, the accompanying prospectus and in any free writing prospectus that we have authorized for use in connection with this offering. We have not, and TD Cowen has not, authorized anyone to give you any other information, and neither we nor TD Cowen take any responsibility for any other information that others may give you. We are not, and TD Cowen is not, making offers to sell the securities in any jurisdiction in which an offer or solicitation is not authorized or permitted or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. The information contained and incorporated by reference in this prospectus supplement, the accompanying prospectus and any free writing prospectus that we have authorized for use in connection with this offering speaks only as of the date of this document, unless the information specifically indicates that another date applies. Neither the delivery of this prospectus supplement, the accompanying prospectus or any free writing prospectus that we have authorized for use in connection with this offering, nor any sale of securities made under these documents, will, under any circumstances, create any implication that there has been no change in our affairs since the date of this prospectus supplement, the accompanying prospectus or any free writing prospectus that we have authorized for use in connection with this offering, nor that the information contained or incorporated by reference is correct as of any time subsequent to the date of such information. You should assume that the information contained and incorporated by reference in this prospectus supplement, the accompanying prospectus and in any free writing prospectus that we have authorized for use in connection with this offering is accurate only as of the date of the documents containing the information, unless the information spe

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference in this prospectus supplement or the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

This prospectus supplement and the accompanying prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the shares of common stock to which it relates, nor do this prospectus supplement and the accompanying prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction.

Unless otherwise indicated, information contained in or incorporated by reference into this prospectus supplement and the accompanying prospectus concerning our industry and the markets in which we operate, including market position and market opportunity, is based on information from our management's estimates, as well as from industry publications and research, surveys and studies conducted by third parties. Management estimates are derived from publicly available information, our knowledge of our industry and assumptions based on such information and knowledge, which we believe to be reasonable. However, assumptions and estimates of our future performance, and the future performance of our industry are subject to numerous known and unknown risks and uncertainties, including those described under the heading "Risk Factors" beginning on page S-9 of this prospectus supplement and the risk factors incorporated by reference into this prospectus supplement and accompanying prospectus. These and other important factors could result in our estimates and assumptions being materially different from future results. You should read the information contained in, or incorporated by reference into, this prospectus supplement and the accompanying prospectus completely and with the understanding that future results may be materially different and worse from what we expect. See the information included under the heading "Special Note Regarding Forward-Looking Statements."

Unless otherwise mentioned or unless the context requires otherwise, throughout this prospectus supplement, the words "Dianthus," "we," "us," "our" or the "Company" refer to Dianthus Therapeutics, Inc., and the term "securities" refers to shares of our common stock.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the accompanying prospectus contain "forward-looking statements" within the meaning of Section 27A of the Securities Act, and Section 21E of the Exchange Act, which statements are subject to substantial risks and uncertainties and are based on estimates and assumptions. All statements, other than statements of historical fact, included or incorporated by reference in this prospectus supplement and the accompanying prospectus are forward-looking statements, including, without limitation, statements concerning our plans, objectives, goals, expectations, hopes, beliefs, intentions, assumptions, projections, estimates or strategies and any underlying assumptions regarding the future, our future results of operations and financial position, including the sufficiency of our existing cash resources to fund our operations for as long as anticipated, our liquidity, capital resources, costs and expenses, capital requirements, commitments and contingencies, the development or commercial potential of DNTH103 or any other product candidate, our anticipated preclinical and clinical drug development activities, in particular with respect to DNTH103, and any timelines, developments or results in connection therewith, including the timing of data, the efficacy, safety profile, dosing amount or frequency, method of delivery or other potential therapeutic benefits of DNTH103, the receipt or timing of potential regulatory designations, approvals and commercialization of any product candidates, market size or addressable patient population and other statements, including those included under the section titled "Risk Factors" and elsewhere in this prospectus supplement and the accompanying prospectus. In some cases, you can identify forwardlooking statements by terms such as "aim," "may," "might," "will," "would," "shall," "objective," "intend," "target," "should," "could," "can," "expect," "anticipate," "believe," "design," "estimate," "forecast," "predict," "project," "potential," "possible," "plan," "seek," "contemplate," "goal," "likely" or "continue" or the negative of these terms and similar expressions intended to identify forward-looking statements, but the absence of these terms does not mean that a statement is not forward-looking. Forward-looking statements are not historical facts and are based on our current expectations and beliefs with respect to future events and their potential effects and impacts. There can be no assurance that future events affecting us will be those that have been anticipated. Given the significant risks and uncertainties, you should not place undue reliance on these forward-looking statements.

There are a number of risks, uncertainties and other factors that could cause our actual results or outcomes, or the timing of our results or outcomes, to differ materially from the forward-looking statements expressed or implied in this prospectus supplement and the accompanying prospectus. Such risks, uncertainties and other factors include, among others, the following risks, uncertainties and factors:

- expectations regarding the strategies, prospects, plans, expectations and objectives of our management for future operations of the company;
- · risks associated with our ability to manage expenses and unanticipated spending and costs that could reduce our cash resources;
- risks related to our ability to correctly estimate our operating expenses and other events;
- changes in capital resource requirements;
- our ability to obtain, maintain and protect our intellectual property rights, in particular those related to our product candidates;
- our ability to advance the development of our product candidates or preclinical activities under the timelines we anticipate in planned and future clinical trials;
- our ability to replicate in later clinical trials positive results found in preclinical studies and early-stage clinical trials of our product candidates;
- our ability to realize the anticipated benefits of our research and development programs, strategic partnerships, licensing programs or other collaborations;
- regulatory requirements or developments, and our ability to obtain necessary approvals from the U.S. Food and Drug Administration (the "FDA") or other regulatory authorities;

- our ability to manufacture product candidates in conformity with the FDA or other regulatory authorities' requirements and to scale up manufacturing of our product candidates to commercial scale, if approved;
- changes to clinical trial designs and regulatory pathways;
- developments and projections relating to our expected or existing competitors or industry;
- unexpected costs, charges or expenses resulting from the business combination with Dianthus Therapeutics OpCo, Inc.;
- legislative, regulatory, political, geopolitical and macroeconomic developments beyond our control, including inflationary pressures, general economic slowdown or a recession, high interest rates, changes in monetary policy or foreign currency exchange rates, instability in financial institutions, the prospect of a shutdown of the U.S. federal government, the ongoing conflict in Ukraine, conflict in the Middle East, rising tensions between China and Taiwan, the attacks on marine vessels traversing the Red Sea and the responses thereto, pandemics or other public health crises and supply chain disruptions;
- success in retaining, recruiting or changes required in, our officers, key employees or directors;
- the liquidity and trading of our securities;
- regulatory actions with respect to our product candidates or our competitors' products and product candidates;
- our ability to successfully develop and commercialize any technology that we may in-license or products we may acquire;
- our ability to successfully operate in non-U.S. jurisdictions in which we may choose to do business, including compliance with applicable regulatory requirements and laws;
- our reliance on third-party contract development and manufacturer organizations to manufacture and supply product candidates;
- our ability to establish satisfactory pricing and obtain adequate reimbursement from government and third-party payors of products and product candidates that receive regulatory approvals, if any;
- our ability to successfully commercialize product candidates, if approved, and the rate and degree of market acceptance of such product candidates;
- risks related to our ability to obtain additional financing and raise capital as necessary to fund operations or pursue business opportunities;
- the direct and indirect effects of widespread health emergencies on our workforce, operations, financial results and cash flows;
- severe weather and seasonal factors;
- our inability to continue to grow and manage our growth effectively;
- our inability to comply with, and the effect on our business of, evolving legal standards and regulations, including those concerning data protection, consumer privacy and sustainability and evolving labor standards; and
- our ability to remediate material weaknesses or other deficiencies in our internal control over financial reporting or to maintain effective disclosure controls and procedures and internal control over financial reporting.

There may be other factors that may cause our actual results or outcomes, or the timing of those results or outcomes, to differ materially from the forward-looking statements expressed or implied in this prospectus

supplement and the accompanying prospectus, including factors identified in this prospectus supplement under the heading "Risk Factors" and in the accompanying prospectus and under similar headings in the other documents incorporated by reference into this prospectus supplement and the accompanying prospectus. You should evaluate all forward-looking statements made in this prospectus supplement and the accompanying prospectus and in the other documents incorporated by reference into this prospectus supplement and the accompanying prospectus in the context of these risks and uncertainties.

We caution you that the risks, uncertainties and other factors referred to above and elsewhere in this prospectus supplement and the accompanying prospectus may not contain all of the risks, uncertainties and other factors that may affect our future results, operations and outcomes. Moreover, new risks emerge from time to time. It is not possible for us to predict all risks. In addition, we cannot assure you that we will realize the results, benefits or developments that we expect or anticipate or, even if substantially realized, that they will result in the consequences or affect us or our business in the way expected. Past performance is not indicative of future performance.

Any forward-looking statements contained or incorporated by reference in this prospectus supplement and the accompanying prospectus apply only as of the date made and are expressly qualified in their entirety by the cautionary statements included in this prospectus supplement and the accompanying prospectus. Except as required by law, we disclaim any intent to publicly update or revise any forward-looking statements, whether as a result of new information, future events, changes in assumptions or otherwise.

PROSPECTUS SUPPLEMENT SUMMARY

The following summary of our business highlights certain of the information contained elsewhere in, or incorporated by reference into, this prospectus supplement and the accompanying prospectus. This summary does not contain all of the information that may be important to you. You should carefully read this entire prospectus supplement and the accompanying prospectus, including any information incorporated by reference, which are described under the headings "Where You Can Find Additional Information" and "Incorporation of Certain Information by Reference" herein and therein. In particular, you should carefully consider the risks and uncertainties described under the heading "Risk Factors" in this prospectus supplement and in the accompanying prospectus, as well as those contained in the other documents incorporated by reference herein and any related free writing prospectus.

ABOUT THE COMPANY

We are a clinical-stage biotechnology company focused on developing next-generation complement therapeutics for patients living with severe autoimmune and inflammatory diseases. We believe our lead novel and proprietary monoclonal antibody product candidate, DNTH103, has the potential to address a broad array of complement-dependent diseases as currently available therapies or those in development leave room for improvements in efficacy, safety, and/or dosing convenience. We have purposefully engineered DNTH103 to selectively bind to only the active form of the C1s complement protein ("C1s") and to exhibit improved potency and an extended half-life. By selectively targeting only the active form of C1s, which drives disease pathology and constitutes only a small fraction of the total protein present in circulation, we aim to reduce the amount of drug required for a therapeutic effect. We intend to deliver our product candidate through a lower dose, less frequent, self-administered, convenient subcutaneous injection suitable for an auto-injector.

Our executive offices are located at 7 Times Square, 43rd Floor, New York, New York 10036, and our telephone number is (929) 999-4055. Our website address is www.dianthustx.com. Information contained on, or accessible through, our website is not incorporated by reference in this prospectus supplement. We have included our website in this prospectus supplement solely as an inactive textual reference. We make our periodic and current reports available on our website, free of charge, as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. We file our annual, quarterly and special reports, proxy statements and other information with the SEC. Our filings with the SEC are also available to the public on the SEC's website at http://www.sec.gov. Our common stock is traded on The Nasdaq Capital Market under the symbol "DNTH."

THE OFFERING

Common stock offered by us pursuant to this prospectus supplement

Shares of our common stock having an aggregate offering price of up to \$200,000,000.

Common stock to be outstanding immediately a

Common stock to be outstanding immediately after this Up to 36,754,064 shares of our common stock, assuming sales of 7,401,924 shares of our offering common stock in this offering at a public offering price of \$27.02 per share, which was the

common stock in this offering at a public offering price of \$27.02 per share, which was the last reported sale price per share of our common stock on The Nasdaq Capital Market on September 26, 2024. The actual number of shares of our common stock issued will vary depending on the sales price under this offering.

Plan of Distribution

"At the market offering" that may be made from time to time through TD Cowen acting as our sales agent. See "Plan of Distribution" for additional information.

Use of Proceeds

We intend to use the net proceeds from this offering to advance our preclinical and clinical development activities, as well as for working capital and general corporate purposes. See "Use of Proceeds" for additional information.

Risk Factors

You should read and consider the information set forth under the heading "Risk Factors" in this prospectus supplement and in the accompanying prospectus, together with the risk factors and cautionary statements described in our most recent Annual Report on Form 10-K, incorporated by reference herein, before deciding to invest in shares of our common stock.

Nasdaq Capital Market symbol

"DNTH"

All information in this prospectus supplement related to the number of shares of our common stock to be outstanding immediately after this offering is based on 29,352,140 shares of our common stock outstanding as of June 30, 2024. The number of shares of our common stock outstanding as of June 30, 2024 as used throughout this prospectus supplement, unless otherwise indicated, excludes:

- 1,383,271 shares of common stock issuable upon the exercise of stock options outstanding under the Dianthus Therapeutics, Inc. 2019 Stock Plan (the "2019 Plan") at a weighted-average exercise price of \$8.82 per share;
- 2,730,140 shares of common stock issuable upon the exercise of stock options outstanding under the Amended and Restated Stock Option and Incentive Plan (the "LTIP") at a weighted-average exercise price of \$19.90 per share;
- 3,265 shares of common stock issuable upon the exercise of stock options outstanding under the Magenta 2016 Stock Option and Grant Plan (the "Magenta 2016 Plan") at a weighted-average exercise price of \$77.44 per share;
- 208,000 shares of common stock issuable upon the exercise of stock options outstanding under the Dianthus Therapeutics, Inc. Equity Inducement Plan (the "Inducement Plan") at a weighted-average exercise price of \$27.35 per share;

- 96,000 shares of common stock issuable upon the exercise of stock options outstanding under the Dianthus Therapeutics, Inc. Inducement Stock Option Agreement (the "Inducement Agreement") at a weighted-average exercise price of \$11.27 per share;
- 100,000 shares of common stock issuable upon the exercise of stock options granted subsequent to June 30, 2024 under the LTIP at a weighted-average exercise price of \$27.63 per share;
- 1,853,704 shares of common stock reserved for issuance under the LTIP;
- 92,000 shares of common stock reserved for issuance under the Inducement Plan;
- 99,578 shares of common stock reserved for issuance under the Dianthus Therapeutics, Inc. 2019 Employee Stock Purchase Plan (the "2019 ESPP");
- 4,876,652 shares of common stock issuable upon the exercise of pre-funded warrants to purchase common stock at a weighted-average exercise price of \$0.001 per share; and
- 4,677 shares of common stock issuable upon the exercise of warrants to purchase common stock at a weighted-average exercise price of \$1.16 per share.

Unless otherwise indicated, all information in this prospectus supplement assumes no exercise of outstanding stock options, pre-funded warrants and warrants as of June 30, 2024.

RISK FACTORS

The following risk factors and other information included in this prospectus supplement should be carefully considered. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we presently deem less significant may also impair our business operations. You should carefully consider the risks described below, as well as those contained in the other documents incorporated by reference and any free writing prospectus that we have authorized for use in connection with this offering, before deciding whether to invest in our common stock. If any of the following risks occur, our business, financial condition, results of operations and future growth prospects could be materially and adversely affected. In any such case, the trading price of our common stock could decline, and you could lose all or part of your investment

Risks Relating to this Offering

We have broad discretion as to the use of proceeds from this offering and may not use the proceeds effectively.

Our management will retain broad discretion as to the allocation of the proceeds and may spend these proceeds in ways in which you may not agree. Because of the number and variability of factors that will determine our use of our existing cash, cash equivalents and short-term investments and the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. The failure of our management to apply these funds effectively could result in unfavorable returns and uncertainty about our prospects, each of which could cause the price of our common stock to decline.

If you purchase shares of our common stock in this offering, you will incur immediate and substantial dilution.

Some or all of the public offering price per share in this offering may exceed the as-adjusted net tangible book value per share of our outstanding common stock. After giving effect to an assumed sale of shares of common stock in the aggregate amount of \$200,000,000 at an assumed public offering price of \$27.02 per share, which was the last reported sale price per share of our common stock on The Nasdaq Capital Market on September 26, 2024, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, you would incur immediate and substantial dilution in the amount of \$12.00 per share. In addition, you may also experience additional dilution after this offering on any future equity issuances, including the issuance of common stock in connection with the 2019 Plan, the LTIP, the Magenta 2016 Plan, the Inducement Plan and the 2019 ESPP. To the extent we raise additional capital by issuing equity securities, our stockholders will experience substantial additional dilution. See "Dilution" for additional information.

You may experience future dilution as a result of future equity offerings.

To raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock at prices that may not be the same as the price per share in this offering. We may sell shares or other securities in any other offering at a price per share that is less than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable into common stock, in future transactions may be higher or lower than the price per share paid by investors in this offering.

It is not possible to predict the aggregate proceeds resulting from sales made under the Sales Agreement.

Subject to certain limitations in the Sales Agreement and compliance with applicable law, we have the discretion to deliver an issuance notice to TD Cowen at any time throughout the term of the Sales Agreement. The number of shares that are sold through TD Cowen after delivering an issuance notice, if any, will fluctuate based on a number of factors, including the market price of shares of our common stock during the sales period, the limits

we set with TD Cowen in any applicable issuance notice and the demand for shares of our common stock during the sales period. Because the price per share of each share of common stock sold pursuant to the Sales Agreement will fluctuate during this offering, it is not currently possible to predict the number of shares of common stock that will be sold or the aggregate proceeds we will raise in connection with those sales under the Sales Agreement, and we may not sell any shares of common stock.

If securities or industry analysts either do not publish research about us or publish inaccurate or unfavorable research about us, our business or our market, or if they change their recommendations regarding our common stock adversely, the trading price or trading volume of our common stock could decline.

The trading market for our common stock will be influenced in part by the research and reports that securities or industry analysts may publish about us, our business, our market, or our competitors. If one or more of these analysts initiate research with an unfavorable rating or downgrade our common stock, provide a more favorable recommendation about our competitors or publish inaccurate or unfavorable research about our business, our common stock price would likely decline. If any analyst who may cover us were to cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause the trading price or trading volume of our common stock to decline.

USE OF PROCEEDS

We may issue and sell shares of our common stock having aggregate sales proceeds of up to \$200,000,000 from time to time. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. There can be no assurance that we will sell any shares under or fully utilize the sales agreement with TD Cowen as a source of financing.

We intend to use the net proceeds, if any, from this offering to further our preclinical and clinical development activities, as well as for working capital and general corporate purposes. We may also use a portion of the proceeds to license, acquire or invest in new product candidates or for drug development activities related to such product candidates, however, we have no current commitments to do so. The expected use of net proceeds from this offering represents our current intentions based on our present plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures will depend on numerous factors, including the progress of our clinical trials and other development efforts and other factors described under "Risk Factors" in this prospectus supplement, the accompanying base prospectus and the documents incorporated by reference herein and therein, as well as the amount of cash used in our operations. We may find it necessary or advisable to use the net proceeds for other purposes, and management will have broad discretion in the timing and application of the net proceeds.

Pending the use of the net proceeds, we may invest the proceeds in a variety of capital preservation investments, including interest-bearing, investment-grade securities, certificates of deposit or government securities.

DILUTION

Dilution represents the difference between the amount per share of common stock paid by purchasers of shares of common stock in this offering and the as-adjusted net tangible book value per share of our common stock immediately after this offering. The data in this section are derived from our balance sheet as of June 30, 2024.

Net tangible book value per share of common stock is equal to our total tangible assets less the amount of our total liabilities, divided by the sum of the number of shares of our common stock outstanding as of June 30, 2024, excluding shares of common stock underlying outstanding options, pre-funded warrants and warrants. Our net tangible book value as of June 30, 2024 was \$358.6 million, or \$12.22 per share of common stock.

We present pro forma as adjusted net tangible book value by giving further effect to the assumed sale of shares of common stock in the aggregate amount of \$200,000,000 at an assumed public offering price of \$27.02 per share, which was the last reported sale price per share of our common stock on The Nasdaq Capital Market on September 26, 2024, and after deducting the commissions and estimated offering expenses payable by us, our pro forma as-adjusted net tangible book value as of June 30, 2024 would have been \$552.2 million, or \$15.02 per share of common stock. This represents an immediate increase in pro forma net tangible book value to existing stockholders of \$2.80 per share of common stock and immediate dilution in pro forma net tangible book value to purchasers of shares of common stock in this offering of \$12.00 per share of common stock. The following table illustrates this dilution per share of common stock:

Assumed public offering price per share of common stock		\$27.02
Net tangible book value per share of common stock as of June 30, 2024	\$12.22	
Increase in pro forma net tangible book value per share of common stock attributable to		
purchasers of shares of common stock in this offering	\$ 2.80	
Pro forma net tangible book value per share of common stock immediately after this offering	,	\$15.02
Dilution in pro forma net tangible book value per share of common stock to purchasers of shares of		
common stock in this offering		\$12.00

The table above illustrates that an aggregate of 7,401,924 shares of our common stock are sold at a price of \$27.02 per share, the last reported sale price of our common stock on The Nasdaq Capital Market on September 26, 2024. The shares of common stock sold in this offering, if any, will be sold from time to time at various prices. An increase of \$1.00 per share in the price at which the shares of common stock are sold would increase the dilution in pro forma net tangible book value per share to purchasers of shares of common stock in this offering to \$12.89 per share, after deducting the commissions and estimated offering expenses payable by us. A decrease of \$1.00 per share in the price at which the shares of common stock are sold would decrease the dilution in pro forma net tangible book value per share to purchasers of shares of common stock in this offering to \$11.11 per share, after deducting the commissions and estimated offering expenses payable by us. This information is supplied for illustrative purposes only.

All information in this prospectus supplement related to the number of shares of our common stock to be outstanding immediately after this offering is based on 29,352,140 shares of our common stock outstanding as of June 30, 2024. The number of shares of our common stock outstanding as of June 30, 2024 as used throughout this prospectus supplement, unless otherwise indicated, excludes:

• 1,383,271 shares of common stock issuable upon the exercise of stock options outstanding under the 2019 Plan at a weighted-average exercise price of \$8.82 per share;

- 2,730,140 shares of common stock issuable upon the exercise of stock options outstanding under the LTIP at a weighted-average exercise price of \$19.90 per share;
- 3,265 shares of common stock issuable upon the exercise of stock options outstanding under the Magenta 2016 Plan at a weighted-average exercise price of \$77.44 per share;
- 208,000 shares of common stock issuable upon the exercise of stock options outstanding under the Inducement Plan at a weighted-average exercise price of \$27.35 per share;
- 96,000 shares of common stock issuable upon the exercise of stock options outstanding under the Inducement Agreement at a weightedaverage exercise price of \$11.27 per share;
- 100,000 shares of common stock issuable upon the exercise of stock options granted subsequent to June 30, 2024 under the LTIP at a weighted-average exercise price of \$27.63 per share;
- 1,853,701 shares of common stock reserved for issuance under the LTIP;
- 92,000 shares of common stock reserved for issuance under the Inducement Plan;
- 99,578 shares of common stock reserved for issuance under the 2019 ESPP;
- 4,876,652 shares of common stock issuable upon the exercise of pre-funded warrants to purchase common stock at a weighted-average exercise price of \$0.001 per share; and
- 4,677 shares of common stock issuable upon the exercise of warrants to purchase common stock at a weighted-average exercise price of \$1.16 per share.

PLAN OF DISTRIBUTION

We have entered into the Sales Agreement with TD Cowen on October 1, 2024, under which we may issue and sell from time to time shares of our common stock through or to TD Cowen as our sales agent. In accordance with the terms of the Sales Agreement and pursuant to this prospectus supplement, we may offer and sell shares of our common stock having an aggregate offering price of up to \$200,000,000. Sales of our common stock, if any, will be made at market prices by any method that is deemed to be an "at the market offering" as defined in Rule 415(a)(4) under the Securities Act. A copy of the Sales Agreement is filed as an exhibit to the registration statement of which this prospectus supplement forms a part. Sales pursuant to the Sales Agreement may be made through an affiliate of TD Cowen.

TD Cowen will offer our common stock subject to the terms and conditions of the Sales Agreement on a daily basis or as otherwise agreed upon by us and TD Cowen. We will designate the maximum amount of common stock to be sold through TD Cowen on a daily basis or otherwise determine such maximum amount together with TD Cowen. Subject to the terms and conditions of the Sales Agreement, TD Cowen will use its commercially reasonable efforts to sell on our behalf all of the shares of common stock requested to be sold by us. We may instruct TD Cowen not to sell common stock if the sales cannot be effected at or above the price designated by us in any such instruction. TD Cowen or we may suspend the offering of our common stock being made through TD Cowen under the Sales Agreement upon proper notice to the other party. TD Cowen and we each have the right, by giving written notice as specified in the Sales Agreement, to terminate the Sales Agreement in each party's sole discretion at any time.

The aggregate compensation payable to TD Cowen as sales agent will be up to 3.0% of the gross proceeds of the shares sold through it pursuant to the Sales Agreement. We have also agreed to reimburse TD Cowen up to an aggregate of \$75,000 of TD Cowen's actual outside legal expenses incurred by TD Cowen in connection with this offering. We estimate that the total expenses of the offering payable by us, excluding commissions payable to TD Cowen under the Sales Agreement, will be approximately \$384,300.

The remaining sales proceeds, after deducting any expenses payable by us and any transaction fees imposed by any governmental, regulatory, or self-regulatory organization in connection with the sales, will equal our net proceeds for the sale of such common stock.

TD Cowen will provide written confirmation to us following the close of trading on The Nasdaq Capital Market on each day in which common stock is sold through it as sales agent under the Sales Agreement. Each confirmation will include the number of shares of common stock sold through it as sales agent on that day, the volume weighted average price of the shares sold, the percentage of the daily trading volume and the net proceeds to us.

We will report at least quarterly the number of shares of common stock sold through TD Cowen under the Sales Agreement and the gross proceeds to us.

Settlement for sales of our common stock will occur on the first business day that is also a trading day following the date on which any sales were made in return for payment of the net proceeds to us, unless the parties agree otherwise. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

In connection with the sales of our common stock on our behalf, TD Cowen will be deemed to be an "underwriter" within the meaning of the Securities Act, and the compensation paid to TD Cowen will be deemed to be underwriting commissions or discounts. We have agreed in the Sales Agreement to provide indemnification and contribution to TD Cowen against certain liabilities, including liabilities under the Securities Act. As sales agent, TD Cowen will not engage in any transactions that stabilizes our common stock.

Our common stock is listed on The Nasdaq Capital Market and trades under the symbol "DNTH." The transfer agent of our common stock is Computershare Trust Company, N.A.

TD Cowen and/or its affiliates have provided, and may in the future provide, various investment banking and other financial services for us for which services they have received and, may in the future receive, customary fees.

EXPERTS

The financial statements of Dianthus Therapeutics, Inc. as of December 31, 2023 and 2022, and for each of the two years in the period ended December 31, 2023, incorporated by reference in this Prospectus, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report. Such financial statements are incorporated by reference in reliance upon the report of such firm given their authority as experts in accounting and auditing.

LEGAL MATTERS

The validity of the common stock being offered in this prospectus supplement will be passed on by Gibson, Dunn & Crutcher LLP, San Francisco, California. TD Securities (USA) LLC is being represented in connection with this offering by Cooley LLP, New York, New York.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

The Company is subject to the informational requirements of the Exchange Act, and in accordance therewith, files annual, quarterly and special reports, proxy statements and other information with the SEC. The SEC maintains an Internet website that contains reports, proxy statements and other information about registrants, like us, that file electronically with the SEC. The address of that site is www.sec.gov. Statements contained in this prospectus supplement as to the contents of any contract or other document are not necessarily complete, and in each instance, we refer you to the copy of the contract or document filed as an exhibit to the registration statement, each such statement being qualified in all respects by such reference.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference the information and reports we file with it, which means that we can disclose important information to you by referring you to these documents. The information incorporated by reference is an important part of this prospectus supplement, and information that we file on or after the date hereof with the SEC will automatically update and supersede the information already incorporated by reference. We are incorporating by reference the documents listed below:

- our Annual Report on Form 10-K for the year ended December 31, 2023 filed with the SEC on March 21, 2024 (and any portions of our Definitive Proxy Statement on Schedule 14A filed on April 11, 2024 that are incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2023);
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2024 filed with the SEC on May 9, 2024, and June 30, 2024 filed with the SEC on August 8, 2024;
- our Current Reports on Form 8-K (other than information furnished rather than filed) filed with the SEC on <u>January 22, 2024</u> and <u>May 28, 2024</u>; and
- the description of our common stock contained in Exhibit 4.5 to our Annual Report on Form 10-K for the year ended December 31, 2023, as filed with the SEC on March 21, 2024, including any amendments or reports filed for the purposes of updating this description.

All documents we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement that contains this prospectus and prior to effectiveness of the registration statement and following the effectiveness of the registration statement until the offering of the securities under the registration statement is terminated or completed shall be deemed incorporated by reference in this prospectus supplement and to be a part of this prospectus supplement from the date of filing of those documents, with the exception of any portion of any report or document that is not deemed "filed" under such provisions on or after the date of this prospectus supplement, until the earlier of the date on which: (1) all of the securities registered hereunder have been sold; or (2) the registration statement of which this prospectus supplement is a part has been withdrawn.

Under no circumstances will any information filed under current items 2.02 or 7.01 of Form 8-K be deemed incorporated herein by reference unless such Form 8-K expressly provides to the contrary.

Upon written or oral request, we will provide without charge to each person to whom a copy of the prospectus supplement is delivered a copy of the documents incorporated by reference herein (other than exhibits to such documents unless such exhibits are specifically incorporated by reference herein). You may request a copy of these filings, at no cost, by writing, calling or emailing us at the contact information set forth below. We have authorized no one to provide you with any information that differs from that contained in this prospectus supplement. Accordingly, we take no responsibility for any other information that others may give you. You should not assume that the information in this prospectus supplement is accurate as of any date other than the date of the front cover of this prospectus supplement.

Dianthus Therapeutics, Inc. Attn: Investor Relations 7 Times Square, 43rd Floor New York, New York 10036 (929) 999-4055

PROSPECTUS



\$500,000,000

COMMON STOCK PREFERRED STOCK DEBT SECURITIES WARRANTS UNITS

From time to time, we may issue, in one or more series or classes, up to a maximum aggregate offering price of \$500,000,000 of our common stock, preferred stock, debt securities, warrants and/or units, at prices and on terms that we will determine at the time of the offering.

This prospectus provides you with a general description of the securities we may offer. Each time we offer securities, we will provide specific terms of the securities offered in a supplement to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectus may also add, update or change information contained in this prospectus. We may not sell any securities under this prospectus without delivery of the applicable prospectus supplement. If information in any prospectus supplement is inconsistent with the information in this prospectus, then the information in that prospectus supplement will apply and will supersede the information in this prospectus.

You should read this prospectus, the applicable prospectus supplement and any related free writing prospectus carefully, as well as any documents incorporated by reference, before you invest in any of the securities being offered.

Our shares of common stock are listed on The Nasdaq Capital Market under the symbol "DNTH." The last reported sale price of our common stock on The Nasdaq Capital Market on September 26, 2024 was \$27.02 per share. We recommend that you obtain current market quotations for our common stock prior to making an investment decision.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading "Risk Factors" contained in this prospectus beginning on page 6 and any applicable prospectus supplement, and under similar headings in the other documents that are incorporated by reference into this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Prospectus dated October 9, 2024

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the "SEC" or the "Commission") utilizing a "shelf" registration process. Under this shelf registration process, we may sell any combination of the securities described in this prospectus from time to time in one or more offerings up to a total dollar amount of \$500,000,000. This prospectus provides you with a general description of the securities we may offer.

Each time we sell securities under this prospectus, we will provide a prospectus supplement that will contain specific information about the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. The prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in any documents that we have incorporated by reference into this prospectus. You should carefully read both this prospectus and any prospectus supplement together with additional information under the headings "Where You Can Find Additional Information" and "Incorporation of Certain Information by Reference."

We have not authorized anyone to provide you with any information other than that contained or incorporated by reference in this prospectus and any applicable prospectus supplement, along with the information contained in any free writing prospectuses we have authorized for use in connection with a specific offering. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. This prospectus, any applicable prospectus supplement or any related free writing prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor do this prospectus, any applicable prospectus supplement or any related free writing prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction.

You should not assume that the information contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus, any applicable prospectus supplement or any related free writing prospectus is delivered, or securities are sold, on a later date.

Unless the context otherwise requires, we use the terms "Dianthus," "company," "we," "us," and "our" in this prospectus to refer to Dianthus Therapeutics, Inc. and, where appropriate, our subsidiaries.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), which statements are subject to substantial risks and uncertainties and are based on estimates and assumptions. All statements, other than statements of historical fact, included or incorporated by reference in this prospectus are forward-looking statements, including, without limitation, statements concerning our plans, objectives, goals, expectations, hopes, beliefs, intentions, assumptions, projections, estimates or strategies and any underlying assumptions regarding the future, our future results of operations and financial position, including the sufficiency of our existing cash resources to fund our operations for as long as anticipated, our liquidity, capital resources, costs and expenses, capital requirements, commitments and contingencies, the development or commercial potential of DNTH103 or any other product candidate, our anticipated preclinical and clinical drug development activities, in particular with respect to DNTH103, and any timelines, developments or results in connection therewith, including the timing of data, the efficacy, safety profile, dosing amount or frequency, method of delivery or other potential therapeutic benefits of DNTH103, the receipt or timing of potential regulatory designations, approvals and commercialization of any product candidates, market size or addressable patient population and other statements, including those included under the section titled "Risk Factors" and elsewhere in this prospectus. In some cases, you can identify forward-looking statements by terms such as "aim," "may," "might," "will," "would," "shall," "objective," "intend," "target," "should," "could," "can," "expect," "anticipate," "believe," "design," "estimate," "forecast," "predict," "project," "potential," "possible," "plan," "seek," "contemplate," "goal," "likely" or "continue" or the negative of these terms and similar expressions intended to identify forward-looking statements, but the absence of these terms does not mean that a statement is not forward-looking. Forward-looking statements are not historical facts and are based on our current expectations and beliefs with respect to future events and their potential effects and impacts. There can be no assurance that future events affecting us will be those that have been anticipated. Given the significant risks and uncertainties, you should not place undue reliance on these forward-looking statements.

There are a number of risks, uncertainties and other factors that could cause our actual results or outcomes, or the timing of our results or outcomes, to differ materially from the forward-looking statements expressed or implied in this prospectus. Such risks, uncertainties and other factors include, among others, the following risks, uncertainties and factors:

- expectations regarding the strategies, prospects, plans, expectations and objectives of our management for future operations of the company;
- risks associated with our ability to manage expenses and unanticipated spending and costs that could reduce our cash resources;
- risks related to our ability to correctly estimate our operating expenses and other events;
- changes in capital resource requirements;
- our ability to obtain, maintain and protect our intellectual property rights, in particular those related to our product candidates;
- our ability to advance the development of our product candidates or preclinical activities under the timelines we anticipate in planned and future clinical trials;
- our ability to replicate in later clinical trials positive results found in preclinical studies and early-stage clinical trials of our product candidates;
- our ability to realize the anticipated benefits of our research and development programs, strategic partnerships, licensing programs or other collaborations;
- regulatory requirements or developments, and our ability to obtain necessary approvals from the U.S. Food and Drug Administration (the "FDA") or other regulatory authorities;

- our ability to manufacture product candidates in conformity with the FDA or other regulatory authorities' requirements and to scale up manufacturing of our product candidates to commercial scale, if approved;
- changes to clinical trial designs and regulatory pathways;
- developments and projections relating to our expected or existing competitors or industry;
- unexpected costs, charges or expenses resulting from the business combination with Dianthus Therapeutics OpCo, Inc.;
- legislative, regulatory, political, geopolitical and macroeconomic developments beyond our control, including inflationary pressures, general economic slowdown or a recession, high interest rates, changes in monetary policy or foreign currency exchange rates, instability in financial institutions, the prospect of a shutdown of the U.S. federal government, the ongoing conflict in Ukraine, conflict in the Middle East, rising tensions between China and Taiwan, the attacks on marine vessels traversing the Red Sea and the responses thereto, pandemics or other public health crises and supply chain disruptions;
- success in retaining, recruiting or changes required in, our officers, key employees or directors;
- the liquidity and trading of our securities;
- regulatory actions with respect to our product candidates or our competitors' products and product candidates;
- our ability to successfully develop and commercialize any technology that we may in-license or products we may acquire;
- our ability to successfully operate in non-U.S. jurisdictions in which we may choose to do business, including compliance with applicable regulatory requirements and laws;
- our reliance on third-party contract development and manufacturer organizations to manufacture and supply product candidates;
- our ability to establish satisfactory pricing and obtain adequate reimbursement from government and third-party payors of products and product candidates that receive regulatory approvals, if any;
- our ability to successfully commercialize product candidates, if approved, and the rate and degree of market acceptance of such product candidates;
- risks related to our ability to obtain additional financing and raise capital as necessary to fund operations or pursue business opportunities;
- the direct and indirect effects of widespread health emergencies on our workforce, operations, financial results and cash flows;
- severe weather and seasonal factors;
- our inability to continue to grow and manage our growth effectively;
- our inability to comply with, and the effect on our business of, evolving legal standards and regulations, including those concerning data protection, consumer privacy and sustainability and evolving labor standards; and
- our ability to remediate material weaknesses or other deficiencies in our internal control over financial reporting or to maintain effective disclosure controls and procedures and internal control over financial reporting.

There may be other factors that may cause our actual results or outcomes, or the timing of those results or outcomes, to differ materially from the forward-looking statements expressed or implied in this prospectus,

including factors identified in this prospectus under the heading "Risk Factors" and in the applicable prospectus supplement and under similar headings in the other documents incorporated by reference into this prospectus. You should evaluate all forward-looking statements made in this prospectus and any prospectus supplement and in the other documents incorporated by reference into this prospectus in the context of these risks and uncertainties.

We caution you that the risks, uncertainties and other factors referred to above and elsewhere in this prospectus may not contain all of the risks, uncertainties and other factors that may affect our future results, operations and outcomes. Moreover, new risks emerge from time to time. It is not possible for us to predict all risks. In addition, we cannot assure you that we will realize the results, benefits or developments that we expect or anticipate or, even if substantially realized, that they will result in the consequences or affect us or our business in the way expected. Past performance is not indicative of future performance.

Any forward-looking statements contained or incorporated by reference in this prospectus apply only as of the date made and are expressly qualified in their entirety by the cautionary statements included in this prospectus. Except as required by law, we disclaim any intent to publicly update or revise any forward-looking statements, whether as a result of new information, future events, changes in assumptions or otherwise.

THE COMPANY

We are a clinical-stage biotechnology company focused on developing next-generation complement therapeutics for patients living with severe autoimmune and inflammatory diseases. We believe our lead novel and proprietary monoclonal antibody product candidate, DNTH103, has the potential to address a broad array of complement-dependent diseases as currently available therapies or those in development leave room for improvements in efficacy, safety, and/or dosing convenience. We have purposefully engineered DNTH103 to selectively bind to only the active form of the C1s complement protein ("C1s") and to exhibit improved potency and an extended half-life. By selectively targeting only the active form of C1s, which drives disease pathology and constitutes only a small fraction of the total protein present in circulation, we aim to reduce the amount of drug required for a therapeutic effect. We intend to deliver our product candidate through a lower dose, less frequent, self-administered, convenient subcutaneous injection suitable for an auto-injector.

Our executive offices are located at 7 Times Square, 43rd Floor, New York, New York 10036, and our telephone number is (929) 999-4055. Our website address is www.dianthustx.com. Information contained on, or accessible through, our website is not incorporated by reference in this prospectus. We have included our website in this prospectus solely as an inactive textual reference. We make our periodic and current reports available on our website, free of charge, as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. We file our annual, quarterly and special reports, proxy statements and other information with the SEC. Our filings with the SEC are also available to the public on the SEC's website at http://www.sec.gov. Our common stock is traded on The Nasdaq Capital Market under the symbol "DNTH."

RISK FACTORS

An investment in our securities involves a high degree of risk. The prospectus supplement applicable to each offering of securities will contain a discussion of the risks applicable to an investment in our securities. Prior to making a decision about investing in our securities, you should carefully consider the risks, uncertainties and other factors contained in our risk factors incorporated by reference to our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, as updated by our subsequent filings, and discussed under the heading "Risk Factors" in the applicable prospectus supplement, together with all other information contained or incorporated by reference in this prospectus or the applicable prospectus supplement. Our business, financial condition, results of operations and future growth prospects could be materially and adversely affected by any of these risks. In these circumstances, the market price of our common stock could decline, and you may lose all or part of your investment. In addition, the risks, uncertainties and other factors we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business, financial condition, results of operations and future growth prospects.

USE OF PROCEEDS

We will retain broad discretion over the use of the net proceeds from the sale of the securities offered hereby. Unless otherwise specified in a prospectus supplement accompanying this prospectus, the net proceeds from the sale by us of the securities to which this prospectus relates will be used to further our preclinical and clinical development activities, as well as for working capital and general corporate purposes. We may also use a portion of the proceeds to license, acquire or invest in new product candidates or for drug development activities related to such product candidates, however, we have no current commitments to do so. Our expected use of proceeds from the sale of the securities offered hereby represents our current intentions based on our present plans and business conditions, which could change in the future as our plans and business conditions evolve. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the proceeds to be received from the sale of the securities offered hereby or the amounts that we will actually spend on the uses set forth above.

Pending the use of the net proceeds, we may invest the proceeds in a variety of capital preservation investments, including interest-bearing, investment-grade securities, certificates of deposit or government securities. When we offer and sell the securities to which this prospectus relates, the prospectus supplement related to such offering will set forth our intended use of the proceeds, if any, received from the sale of such securities.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business. We do not intend to pay cash dividends on our common stock for the foreseeable future. Any future determination to pay dividends will be at the discretion of our board of directors and will depend upon a number of factors, including our results of operations, financial condition, future prospects, contractual restrictions and restrictions imposed by applicable laws and other factors our board of directors deems relevant.

SECURITIES WE MAY OFFER

This prospectus contains summary descriptions of the securities we may offer from time to time. These summary descriptions are not meant to be complete descriptions of each security. The particular terms of any security will be described in the applicable prospectus supplement.

DESCRIPTION OF SECURITIES

The following is a description of our capital stock and does not purport to be complete and is subject to, and qualified in its entirety by, our fifth amended and restated certificate of incorporation ("charter") and our third amended and restated bylaws ("bylaws"), each of which is incorporated herein by reference. You should refer to our charter and our bylaws for the actual terms of our capital stock. Copies of our charter and bylaws are incorporated by reference as exhibits to our most recent Annual Report on Form 10-K filed with the SEC and may be obtained as described under the heading "Where You Can Find Additional Information" in this prospectus.

Authorized Capital Stock

Our authorized capital stock consists of 150,000,000 shares of common stock, par value \$0.001 per share ("Common Stock"), and 10,000,000 shares of undesignated preferred stock, par value \$0.001 per share ("Preferred Stock"). As of September 26, 2024, 29,366,352 shares of our Common Stock were issued and outstanding, and none of our Preferred Stock were issued and outstanding.

Common Stock

Dividends

Holders of Common Stock are entitled to receive dividends ratably, if any, as may be declared by our board of directors out of legally available funds, subject to any preferential dividend rights of any Preferred Stock then outstanding.

Voting

Holders of Common Stock are entitled to one vote for each share of Common Stock held of record for the election of directors of Dianthus and on all matters submitted to a vote of the stockholders. The holders of Common Stock do not have any cumulative voting rights.

Distributions on Liquidation

In the event of our dissolution, liquidation or winding up, holders of Common Stock are entitled to share ratably in our net assets legally available after the payment of all our debts and other liabilities, subject to the preferential rights of any Preferred Stock then outstanding. The rights, preferences and privileges of holders of Common Stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of Preferred Stock that we may designate and issue in the future.

Other Rights

Holders of Common Stock are not entitled to preemptive, subscription, redemption or conversion rights, and no sinking fund provisions are applicable to Common Stock.

Anti-Takeover Effects of Delaware Law and Provisions of Our Charter and Bylaws

Certain provisions of the General Corporation Law of Delaware (the "DGCL") and of our charter and bylaws could have the effect of delaying, deferring or discouraging another party from acquiring control of Dianthus. These provisions, which are summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids and, as a consequence, they might also inhibit temporary fluctuations in the market price of our Common Stock that often result from actual or rumored hostile takeover attempts. These provisions are also designed in part to encourage anyone seeking to acquire control of Dianthus

to first negotiate with our board of directors. These provisions might also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders might otherwise deem to be in their best interests. However, we hold that the advantages gained by protecting our ability to negotiate with any unsolicited and potentially unfriendly acquirer outweigh the disadvantages of discouraging such proposals, including those priced above the then-current market value of our Common Stock, because, among other reasons, the negotiation of such proposals could improve their terms.

Delaware Anti-Takeover Statute

We are subject to the provisions of Section 203 of the DGCL. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the date that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, the board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding shares owned by persons who are directors and also officers, and employee stock plans, in some instances, but not the outstanding voting stock owned by the interested stockholder; or
- at or after the time the stockholder became interested, the business combination was approved by the board of directors and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation or any direct or indirect majority-owned subsidiary of the corporation and the interested stockholder;
- any sale, transfer, lease, pledge or other disposition (in one or more transactions) involving the interested stockholder of 10% or more of either the aggregate market value of all (i) the assets of the corporation or (ii) the outstanding capital stock of the corporation, involving the interested stockholder;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation or by any direct or indirect majority-owned subsidiary of the corporation of any stock of the corporation or any subsidiary to the interested stockholder;
- subject to exceptions, any transaction involving the corporation or any direct or indirect majority-owned subsidiary of the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation or of any subsidiary beneficially owned by the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation or any direct or indirect majority-owned subsidiary.

In general, Section 203 defines an "interested stockholder" as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person that is an affiliate or associate of the corporation and who beneficially owned 15% or more of the outstanding voting stock of the corporation at any time within the three year period immediately prior to the date of determining whether such entity or person is an interested stockholder, and any affiliate or associate of that entity or person.

Choice of Forum

Our bylaws provide that, unless we consent in writing to an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for state law claims for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of or based on a breach of a fiduciary duty owed by any of our current or former directors, officers, or other employees to us or our stockholders, (iii) any action asserting a claim against us or any of our current or former directors, officers, employees or stockholders arising pursuant to any provision of the DGCL, our charter or our bylaws, or (iv) any action asserting a claim that is governed by the internal affairs doctrine, in each case subject to the Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein, which we refer to herein as the "Delaware Forum Provision." The Delaware Forum Provision will not apply to any causes of action arising under the Securities Act or the Exchange Act. Our bylaws further provide that, unless we consent in writing to an alternative forum, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act, which we refer to herein as the "Federal Forum Provision." In addition, our bylaws provide that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and consented to the foregoing Delaware Forum Provision and Federal Forum Provision.

We recognize that the Delaware Forum Provision and the Federal Forum Provision may impose additional litigation costs on stockholders in pursuing any such claims, particularly if the stockholders do not reside in or near the State of Delaware. Additionally, the forum selection clauses in our bylaws may limit our stockholders' ability to bring a claim in a judicial forum that they find favorable for disputes with us or our directors, officers or employees, which may discourage the filing of lawsuits against us and our directors, officers and employees even though an action, if successful, might benefit our stockholders. Alternatively, if the Federal Forum Provision is found inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could have an adverse effect on our business, financial condition or results of operations. The Court of Chancery of the State of Delaware or the federal district courts of the United States may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments may be more or less favorable to us than our stockholders.

Board Composition and Filling Vacancies

In accordance with our charter, our board is divided into three classes serving staggered three-year terms, with one class being elected each year. Our charter also provides that directors may be removed only for cause and then only by the affirmative vote of the holders of two-thirds or more of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of the remaining directors then in office, even if less than a quorum. The classification of directors, together with the limitations on removal of directors and treatment of vacancies, has the effect of making it more difficult for stockholders to change the composition of our board of directors.

No Written Consent of Stockholders

Our charter provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This requirement may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our bylaws or removal of directors by our stockholders without holding a meeting of stockholders.

Meetings of Stockholders

Our charter and our bylaws provide that only a majority of the members of our board of directors then in office may call special meetings of stockholders and only those matters set forth in the notice of the special

meeting may be considered or acted upon at a special meeting of stockholders. Our bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance Notice Requirements

Our bylaws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. Our bylaws specify the requirements as to form and content of all stockholders' notices. These requirements may preclude stockholders from bringing matters before the stockholders at an annual or special meeting.

Amendment to Our Charter and Our Bylaws

As required by the DGCL, any amendment of our charter must first be approved by a majority of our board of directors, and, if required by law or our charter, must thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, board composition, limitation of liability, the amendment of our bylaws and the amendment of our charter must be approved by not less than two-thirds of the outstanding shares entitled to vote on the amendment, and not less than two-thirds of the outstanding shares of each class entitled to vote thereon as a class.

Our bylaws may be amended by the affirmative vote of a majority of the directors then in office, subject to any limitations set forth in the bylaws, and may also be amended by the affirmative vote of at least two-thirds of the outstanding shares entitled to vote on the amendment, or, if our board of directors recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

Undesignated Preferred Stock

Our charter provides for 10,000,000 authorized shares of Preferred Stock. The existence of authorized but unissued shares of Preferred Stock may enable our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of our stockholders, our board of directors could cause shares of Preferred Stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. The issuance of shares of Preferred Stock could decrease the amount of earnings and assets available for distribution to holders of shares of Common Stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Nasdaq Capital Market Listing

Our Common Stock is listed on The Nasdaq Capital Market under the symbol "DNTH."

Transfer Agent and Registrar

The transfer agent and registrar for our Common Stock is Computershare Trust Company, N.A. The transfer agent and registrar's address is 150 Royall Street, Canton, Massachusetts 02021, and its telephone number is (800) 962-4284.

Registration Rights Agreements

Certain of the holders of our Common Stock are entitled to rights with respect to the registration of such securities as set forth below under the Securities Act.

2023 Registration Rights Agreement

Pursuant to that certain registration rights agreement, dated September 11, 2023 (the "2023 Registration Rights Agreement"), the company agreed to prepare and file a shelf registration statement covering the resale of the Common Stock within 45 days of the date of the 2023 Registration Rights Agreement pursuant to Rule 415 of the Securities Act, and to use its reasonable best efforts to keep such registration statement continuously effective under the Securities Act until the earlier of (a) the date that all registrable securities covered by such registration statement (i) have been sold, thereunder or pursuant to Rule 144, or (ii) may be sold without volume or manner-of-sale restrictions pursuant to Rule 144 and without the requirement for the company to be in compliance with the current public information requirement under Rule 144, and (b) five years after the date of the 2023 Registration Rights Agreement. The 2023 Registration Rights Agreement also provides that the company pay certain expenses of the securityholders and indemnify the applicable securityholders against certain liabilities.

2024 Registration Rights Agreement

Pursuant to that certain registration rights agreement, dated January 22, 2024 (the "2024 Registration Rights Agreement"), the company agreed to prepare and file a registration statement with the SEC no later than the second business day following the later of (i) the filing date of the company's Annual Report on Form 10-K for its fiscal year ending December 31, 2023 and (ii) the effectiveness date of the company's registration statement on Form S-1 (File No. 333-274863), and to use its commercially reasonable efforts to have the registration statement declared effective within 30 days thereafter, subject to certain exceptions and specified penalties if timely effectiveness is not achieved.

The company has also agreed to, among other things, indemnify the applicable securityholders named in the 2024 Registration Rights Agreement, their officers, directors, agents, partners, members, managers, stockholders, affiliates, investment advisers and employees under the registration statement from certain liabilities and pay all fees and expenses (excluding any legal fees of the selling holder(s), and any underwriting discounts and selling commissions) incident to the company's obligations under the 2024 Registration Rights Agreement.

Preferred Stock

Under our charter, our board of directors is authorized, without further action by the stockholders, to designate and issue up to an aggregate of 10,000,000 shares of Preferred Stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of Common Stock. Our board of directors may authorize the issuance of Preferred Stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of Common Stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation.

The purpose of authorizing our board of directors to issue Preferred Stock in one or more series and determine the number of shares in the series and its rights, preferences, privileges and restrictions is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of Preferred Stock, while providing flexibility in connection with possible future financings and acquisitions and other corporate purposes could, under certain circumstances, have the effect of delaying, deferring or preventing a change in control of the company.

We will fix the designations, voting powers, preferences and rights of the Preferred Stock of each series we issue, as well as the qualifications, limitations or restrictions thereof, in the certificate of designation relating to that series. We will describe the terms of the series of Preferred Stock being offered, including, to the extent applicable:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
- the purchase price;
- the dividend rate, period and payment date and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- the procedures for any auction and remarketing;
- the provisions for a sinking fund;
- the provisions for redemption or repurchase and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the Preferred Stock on any securities exchange or market;
- whether the Preferred Stock will be convertible into our Common Stock, and the conversion rate or conversion price, or how they will be calculated, and the conversion period;
- whether the Preferred Stock will be exchangeable into debt securities, and the exchange rate or exchange price, or how they will be calculated, and the exchange period;
- voting rights of the Preferred Stock;
- preemptive rights;
- restrictions on transfer, sale or other assignment;
- whether interests in the Preferred Stock will be represented by depositary shares;
- a discussion of material or special U.S. federal income tax considerations applicable to the Preferred Stock;
- the relative ranking and preferences of the Preferred Stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on the issuance of any class or series of Preferred Stock ranking senior to or on a parity with the series of Preferred Stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the Preferred Stock.

Debt Securities

The paragraphs below describe the general terms and provisions of the debt securities we may issue. When we offer to sell a particular series of debt securities, we will describe the specific terms of the securities in a supplement to this prospectus, including any additional covenants or changes to existing covenants relating to such series. The prospectus supplement also will indicate whether the general terms and provisions described in this prospectus apply to a particular series of debt securities. You should read the actual indenture if you do not fully understand a term or the way we use it in this prospectus.

If we issue debt securities at a discount from their principal amount, then, for purposes of calculating the aggregate initial offering price of the offered securities issued under this prospectus, we will include only the initial offering price of the debt securities and not the principal amount of the debt securities.

We have summarized below the material provisions of the indenture, or indicated which material provisions will be described in the related prospectus supplement. The prospectus supplement relating to any particular securities offered will describe the specific terms of the securities, which may be in addition to or different from the general terms summarized in this prospectus. We have included the form of the indenture as an exhibit to our registration statement of which this prospectus is a part, and it is incorporated into this prospectus by reference. Because the summary in this prospectus and in any prospectus supplement does not contain all of the information that you may find useful, you should read the documents relating to the securities that are described in this prospectus or in any applicable prospectus supplement. Please read "Where You Can Find Additional Information" in this prospectus to find out how you can obtain a copy of those documents. References below to an "indenture" are references to the indenture, as supplemented, under which a particular series of debt securities is issued. As used under this caption, the term "debt securities" includes the debt securities being offered by this prospectus and all other debt securities issued by us under the indenture.

General

The indenture:

- does not limit the amount of debt securities that we may issue;
- allows us to issue debt securities in one or more series;
- does not require us to issue all of the debt securities of a series at the same time; and
- allows us to reopen a series to issue additional debt securities without the consent of the holders of the debt securities of such series.

The prospectus supplement for each offering of debt securities will provide the following terms, where applicable:

- the title of the debt securities and whether they are senior, senior subordinated or subordinated debt securities;
- the aggregate principal amount of the debt securities being offered and any limit on their aggregate principal amount, and, if the series is to be issued at a discount from its face amount, the method of computing the accretion of such discount;
- the price at which the debt securities will be issued, expressed as a percentage of the principal and, if other than the full principal amount thereof, the portion of the principal amount thereof payable upon declaration of acceleration of the maturity thereof or, if applicable, the portion of the principal amount of such debt securities that is convertible into common stock or preferred stock or the method by which any such portion shall be determined;
- if convertible, the terms on which such debt securities are convertible, including the initial conversion price or rate or the method of calculation, how and when the conversion price or exchange ratio may be adjusted, whether conversion or exchange is mandatory, at the option of the holder or at our option, the conversion or exchange period, and any other provision in relation thereto, and any applicable
- limitations on the ownership or transferability of common stock or preferred stock received on conversion;
- the date or dates, or the method for determining the date or dates, on which the principal of the debt securities will be payable;

- the fixed or variable interest rate or rates of the debt securities, or the method by which the interest rate or rates is determined;
- the date or dates, or the method for determining the date or dates, from which interest will accrue;
- the dates on which interest will be payable;
- the record dates for interest payment dates, or the method by which we will determine those dates;
- the persons to whom interest will be payable;
- the basis upon which interest will be calculated if other than that of a 360-day year of twelve 30-day months;
- any collateral securing the performance of our obligations under the debt securities;
- the place or places where the principal of, premium, if any, and interest on, the debt securities will be payable;
- where the debt securities may be surrendered for registration of transfer or conversion or exchange;
- where notices or demands to or upon us in respect of the debt securities and the applicable indenture may be served;
- any provisions regarding our right to redeem or purchase debt securities or the right of holders to require us to redeem or purchase debt securities;
- any right or obligation we have to redeem, repay or purchase the debt securities pursuant to any sinking fund or analogous provision;
- the currency or currencies (including any composite currency) in which the debt securities are denominated and payable if other than United States dollars, and the currency or currencies (including any composite currency) in which principal, premium, if any, and interest, if any, will be payable, and if such payments may be made in a currency other than that in which the debt securities are denominated, the manner for determining such payments, including the time and manner of determining the exchange rate between the currency in which such securities are denominated and the currency in which such securities or any of them may be paid, and any additions to, modifications of or deletions from the terms of the debt securities to provide for or to facilitate the issuance of debt securities denominated or payable in a currency other than U.S. dollars;
- whether the amount of payments of principal of, premium, if any, or interest on, the debt securities may be determined according to an index, formula or other method and how such amounts will be determined;
- whether the debt securities will be in registered form, bearer form or both, and the terms of these forms;
- whether the debt securities will be issued in whole or in part in the form of a global security and, if applicable, the identity of the depositary for such global security;
- any provision for electronic issuance of the debt securities or issuance of the debt securities in uncertificated form;
- whether and upon what terms the debt securities of such series may be defeased or discharged, if different from the provisions set forth in the indenture for the series to which the supplemental indenture or authorizing resolution relates;
- any provisions granting special rights to holders of securities upon the occurrence of such events as specified in the applicable prospectus supplement;
- any deletions from, modifications of, or additions to our events of default or covenants or other provisions set forth in the indenture for the series to which the supplemental indenture or authorizing resolution relates; and

any other material terms of the debt securities, which may be different from the terms set forth in this prospectus.

We may issue debt securities at a discount below their principal amount and provide for less than the entire principal amount thereof to be payable upon declaration of acceleration of the maturity of the debt securities. We refer to any such debt securities throughout this prospectus as "original issue discount securities." The applicable prospectus supplement will describe the United States federal income tax consequences and other relevant considerations applicable to original issue discount securities.

Neither the DGCL nor our governing instruments define the term "substantially all" as it relates to the sale of assets. Additionally, Delaware cases interpreting the term "substantially all" rely upon the facts and circumstances of each particular case. Consequently, to determine whether a sale of "substantially all" of our assets has occurred, a holder of debt securities must review the financial and other information that we have disclosed to the public.

The applicable prospectus supplement will also describe any material covenants to which a series of debt securities will be subject and the applicability of those covenants to any of our subsidiaries to be restricted thereby, which are referred to herein as "restricted subsidiaries." The applicable prospectus supplement will also describe provisions for restricted subsidiaries to cease to be restricted by those covenants.

Events of Default

Unless the applicable prospectus supplement states otherwise, when we refer to "events of default" as defined in the indentures with respect to any series of debt securities, we mean:

- our failure to pay interest on any debt security of such series when the same becomes due and payable and the continuance of any such failure for a period of 30 days;
- our failure to pay the principal or premium of any debt security of such series when the same becomes due and payable at maturity, upon
 acceleration, redemption or otherwise;
- our failure or the failure of any restricted subsidiary to comply with any of its agreements or covenants in, or provisions of, the debt securities of such series or the indenture (as they relate thereto) and such failure continues for a period of 60 days after our receipt of notice of the default from the trustee or from the holders of at least 25 percent in aggregate principal amount of the then outstanding debt securities of that series (except in the case of a default with respect to the provisions of the indenture regarding the consolidation, merger, sale, lease, conveyance or other disposition of all or substantially all of the assets of us (or any other provision specified in the applicable supplemental indenture or authorizing resolution), which will constitute an event of default with notice but without passage of time); or
- certain events of bankruptcy, insolvency or reorganization occur with respect to Dianthus or any restricted subsidiary of Dianthus that is a significant subsidiary (as defined in the indenture).

If an event of default occurs and is continuing with respect to debt securities of any series outstanding, then the trustee or the holders of 25% or more in principal amount of the outstanding debt securities of that series will have the right to declare the principal amount of all the debt securities of that series to be due and payable immediately. However, the holders of at least a majority in principal amount of outstanding debt securities of such series may rescind and annul such declaration and its consequences, except an acceleration due to nonpayment of principal or interest on such series, if the rescission would not conflict with any judgment or decree and if all existing events of default with respect to such series have been cured or waived.

The indenture also provides that the holders of at least a majority in principal amount of the outstanding debt securities of any series, by notice to the trustee, may, on behalf of all holders, waive any existing default and

its consequences with respect to such series of debt securities, other than any event of default in payment of principal or interest.

The indenture will require the trustee to give notice to the holders of debt securities within 90 days after the trustee obtains knowledge of a default that has occurred and is continuing. However, the trustee may withhold notice to the holders of any series of debt securities of any default, except a default in payment of principal or interest, if any, with respect to such series of debt securities, if the trustee considers it in the interest of the holders of such series of debt securities to do so.

The holders of a majority of the outstanding principal amount of the debt securities of any series will have the right to direct the time, method and place of conducting any proceedings for any remedy available to the trustee with respect to such series, subject to limitations specified in the indenture.

Amendment, Supplement and Waiver

Without notice to or the consent of any holder, we and the trustee may amend or supplement the indenture or the debt securities of a series:

- to cure any ambiguity, omission, defect or inconsistency;
- to comply with the provisions of the indenture regarding the consolidation, merger, sale, lease, conveyance or other disposition of all or substantially all of our assets;
- to provide that specific provisions of the indenture shall not apply to a series of debt securities not previously issued or to make a change to specific provisions of the indenture that only applies to any series of debt securities not previously issued or to additional debt securities of a series not previously issued;
- to create a series and establish its terms;
- to provide for uncertificated debt securities in addition to or in place of certificated debt securities;
- to release a guarantor in respect of any series which, in accordance with the terms of the indenture applicable to such series, ceases to be liable in respect of its guarantee;
- to add a guarantor subsidiary in respect of any series of debt securities;
- to secure any series of debt securities;
- to add to the covenants of Dianthus for the benefit of the holders or surrender any right or power conferred upon Dianthus;
- to appoint a successor trustee with respect to the securities;
- to comply with requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act of 1939, as amended;
- to make any change that does not adversely affect the rights of holders; or
- to conform the provisions of the indenture to the final offering document in respect of any series of debt securities.

The indenture will provide that we and the trustee may amend or supplement any provision of the debt securities of a series or of the indenture relating to such series with the written consent of the holders of at least a majority in principal amount of the outstanding debt securities of such series. However, without the consent of each holder of a debt security the terms of which are directly amended, supplemented or waived, an amendment, supplement or waiver may not:

• reduce the amount of debt securities of such series whose holders must consent to an amendment, supplement or waiver;

- reduce the rate of or extend the time for payment of interest, including defaulted interest;
- reduce the principal of or extend the fixed maturity of any debt security or alter the provisions with respect to redemptions or mandatory
 offers to repurchase debt securities of a series in a manner adverse to holders;
- make any change that adversely affects any right of a holder to convert or exchange any debt security into or for shares of our Common Stock or other securities, cash or other property in accordance with the terms of such security;
- modify the ranking or priority of the debt securities of the relevant series;
- release any guarantor of any series from any of its obligations under its guarantee or the indenture otherwise than in accordance with the terms of the indenture:
- make any change to any provision of the indenture relating to the waiver of existing defaults, the rights of holders to receive payment of
 principal and interest on the debt securities, or to the provisions regarding amending or supplementing the indenture or the debt securities
 of a particular series with the written consent of the holders of such series, except to increase the percentage required for modification or
 waiver or to provide for consent of each affected holder of debt securities of such series;
- waive a continuing default or event of default in the payment of principal of or interest on the debt securities; or
- make any debt security payable at a place or in money other than that stated in the debt security, or impair the right of any holder of a debt security to bring suit as permitted by the indenture.

The holders of a majority in aggregate principal amount of the outstanding debt securities of such series may, on behalf of all holders of debt securities of that series, waive any existing default under, or compliance with, any provision of the debt securities of a particular series or of the indenture relating to a particular series of debt securities, other than any event of default in payment of interest or principal.

Defeasance

The indenture will permit us to terminate all our respective obligations under the indenture as they relate to any particular series of debt securities, other than the obligation to pay interest, if any, on and the principal of the debt securities of such series and certain other obligations, at any time by:

- depositing in trust with the trustee, under an irrevocable trust agreement, money or government obligations in an amount sufficient to pay principal of and interest, if any, on the debt securities of such series to their maturity or redemption; and
- complying with other conditions, including delivery to the trustee of an opinion of counsel to the effect that holders will not recognize income, gain or loss for federal income tax purposes as a result of our exercise of such right and will be subject to federal income tax on the same amount and in the same manner and at the same times as would have been the case otherwise.

The indenture will also permit us to terminate all of our respective obligations under the indenture as they relate to any particular series of debt securities, including the obligations to pay interest, if any, on and the principal of the debt securities of such series and certain other obligations, at any time by:

- depositing in trust with the trustee, under an irrevocable trust agreement, money or government obligations in an amount sufficient to pay
 principal and interest, if any, on the debt securities of such series to their maturity or redemption; and
- complying with other conditions, including delivery to the trustee of an opinion of counsel to the effect that (A) we have received from, or there has been published by, the Internal Revenue Service a ruling,

or (B) since the date such series of debt securities were originally issued, there has been a change in the applicable federal income tax law, in either case to the effect that, and based thereon such opinion of counsel shall state that, holders will not recognize income, gain or loss for federal income tax purposes as a result of our exercise of such right and will be subject to federal income tax on the same amount and in the same manner and at the same times as would have been the case otherwise.

In addition, the indenture will permit us to terminate substantially all our respective obligations under the indenture as they relate to a particular series of debt securities by depositing with the trustee money or government obligations sufficient to pay all principal and interest on such series at its maturity or redemption date if the debt securities of such series will become due and payable at maturity within one year or are to be called for redemption within one year of the deposit.

Transfer and Exchange

A holder will be able to transfer or exchange debt securities only in accordance with the indenture. The registrar may require a holder, among other things, to furnish appropriate endorsements and transfer documents, and to pay any taxes and fees required by law or permitted by the indenture.

Concerning the Trustee

The indenture will contain limitations on the rights of the trustee, should it become our creditor, to obtain payment of claims in specified cases or to realize on property received in respect of any such claim as security or otherwise. The indenture will permit the trustee to engage in other transactions; however, if it acquires any conflicting interest, it must eliminate such conflict or resign.

The indenture will provide that in case an event of default occurs and is not cured, the trustee will be required, in the exercise of its power, to use the degree of care of a prudent person in similar circumstances in the conduct of such person's own affairs. The trustee shall be under no obligation to exercise any of the rights or powers vested in it by the indenture at the request or direction of any of the holders pursuant to the indenture, unless such holders shall have offered to the trustee security or indemnity satisfactory to the trustee against the costs, expenses and liabilities which might be incurred by it in compliance with such request or direction.

No Recourse Against Others

The indenture will provide that there is no recourse under any obligation, covenant or agreement in the applicable indenture or with respect to any debt security against any of our or our successor's past, present or future stockholders, employees, officers or directors.

Governing Law

The laws of the State of New York will govern the indenture and the debt securities.

Warrants

We may issue warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series, from time to time. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from those securities.

If we issue warrants, they will be evidenced by warrant agreements or warrant certificates issued under one or more warrant agreements, which are contracts between us and an agent for the holders of the warrants. We urge you to read the prospectus supplement related to any series of warrants we may offer, as well as the complete warrant agreement and warrant certificate that contain the terms of the warrants. If we issue warrants, forms of warrant agreements and warrant certificates relating to warrants for the purchase of common stock, preferred stock and debt securities will be incorporated by reference into the registration statement of which this prospectus is a part from reports we would subsequently file with the SEC.

Units

We may issue units consisting of any combination of the other types of securities offered under this prospectus in one or more series. We may evidence each series of units by unit certificates that we will issue under a separate agreement. We may enter into unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of the unit agent in the applicable prospectus supplement relating to a particular series of units.

The following description, together with the additional information included in any applicable prospectus supplement, summarizes the general features of the units that we may offer under this prospectus. You should read any prospectus supplement and any free writing prospectus that we may authorize to be provided to you related to the series of units being offered, as well as the complete unit agreements that contain the terms of the units. Specific unit agreements will contain additional important terms and provisions and we will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from another report that we file with the SEC, the form of each unit agreement relating to units offered under this prospectus.

If we offer any units, certain terms of that series of units will be described in the applicable prospectus supplement, including, without limitation, the following, as applicable:

- the title of the series of units;
- identification and description of the separate constituent securities comprising the units;
- the price or prices at which the units will be issued;
- the date, if any, on and after which the constituent securities comprising the units will be separately transferable;
- a discussion of certain United States federal income tax considerations applicable to the units; and
- any other terms of the units and their constituent securities.

PLAN OF DISTRIBUTION

We may sell the securities from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods. We may sell the securities to or through underwriters or dealers, through agents, or directly to one or more purchasers. We may distribute securities from time to time in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

We may also sell equity securities covered by this registration statement in an "at the market offering" as defined in Rule 415(a)(4) under the Securities Act. Such offering may be made into an existing trading market for such securities in transactions at other than a fixed price, either:

- on or through the facilities of The Nasdaq Capital Market or any other securities exchange or quotation or trading service on which such securities may be listed, quoted or traded at the time of sale; and/or
- to or through a market maker otherwise than on The Nasdaq Capital Market or such other securities exchanges or quotation or trading services.

Such at the market offerings, if any, may be conducted by underwriters acting as principal or agent.

A prospectus supplement or supplements (and any related free writing prospectus that we may authorize to be provided to you) will describe the terms of the offering of the securities, including, to the extent applicable:

- the name or names of any underwriters, dealers or agents, if any;
- the purchase price of the securities and the proceeds we will receive from the sale;
- any options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and other items constituting agents' or underwriters' compensation;
- any public offering price;
- any discounts or concessions allowed or re-allowed or paid to dealers; and
- any securities exchange or market on which the securities may be listed.

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all of the securities offered by the prospectus supplement. Any public offering price and any discounts or concessions allowed or re-allowed or paid to dealers may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities, and we will describe any commissions we will pay the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may provide agents and underwriters with indemnification against civil liabilities related to offerings pursuant to this prospectus, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

All securities we offer, other than our shares of common stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for any securities.

Any underwriter may engage in overallotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Overallotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a stabilizing or covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time. These transactions may be effected on any exchange or over-the-counter market or otherwise.

Any underwriters who are qualified market makers on The Nasdaq Capital Market may engage in passive market making transactions in the securities on The Nasdaq Capital Market in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

LEGAL MATTERS

Certain legal matters, including the legality of the securities offered, will be passed upon for us by Gibson, Dunn & Crutcher LLP, San Francisco, California. Additional legal matters may be passed upon for us or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

EXPERTS

The financial statements of Dianthus Therapeutics, Inc. incorporated by reference in this Prospectus, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report. Such financial statements are incorporated by reference in reliance upon the report of such firm, given their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We file annual, quarterly and other reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at www.sec.gov. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, including any amendments to those reports, and other information that we file with or furnish to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act can also be accessed free of charge through the Internet. These filings will be available as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.

This prospectus is part of a registration statement that we filed with the SEC. This prospectus omits some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information about us and our subsidiaries and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference the information and reports we file with it, which means that we can disclose important information to you by referring you to these documents. The information incorporated by reference is an important part of this prospectus, and information that we file on or after the date hereof with the SEC will automatically update and supersede the information already incorporated by reference. We are incorporating by reference the documents listed below:

- our Annual Report on Form 10-K for the year ended December 31, 2023 filed with the SEC on March 21, 2024 (and any portions of our Definitive Proxy Statement on Schedule 14A filed on April 11, 2024 that are incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2023);
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2024 filed with the SEC on May 9, 2024, and June 30, 2024 filed with the SEC on August 8, 2024;
- our Current Reports on Form 8-K (other than information furnished rather than filed) filed with the SEC on <u>January 22, 2024</u> and <u>May 28, 2024</u>; and
- the description of our common stock contained in <u>Exhibit 4.5</u> to our Annual Report on Form 10-K for the year ended December 31, 2023, as filed with the SEC on March 21, 2024, including any amendments or reports filed for the purposes of updating this description.

All documents we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement that contains this prospectus and prior to effectiveness of the registration statement and following the effectiveness of the registration statement until the offering of the securities under the registration statement is terminated or completed shall be deemed incorporated by reference in this prospectus and to be a part of this prospectus from the date of filing of those documents, with the exception of any portion of any report or document that is not deemed "filed" under such provisions on or after the date of this prospectus, until the earlier of the date on which: (1) all of the securities registered hereunder have been sold; or (2) the registration statement of which this prospectus is a part has been withdrawn.

Under no circumstances will any information filed under current items 2.02 or 7.01 of Form 8-K be deemed incorporated herein by reference unless such Form 8-K expressly provides to the contrary.

Upon written or oral request, we will provide without charge to each person to whom a copy of the prospectus is delivered a copy of the documents incorporated by reference herein (other than exhibits to such documents unless such exhibits are specifically incorporated by reference herein). You may request a copy of these filings, at no cost, by writing, calling or emailing us at the contact information set forth below. We have authorized no one to provide you with any information that differs from that contained in this prospectus. Accordingly, we take no responsibility for any other information that others may give you. You should not assume that the information in this prospectus is accurate as of any date other than the date of the front cover of this prospectus.

Dianthus Therapeutics, Inc. Attn: Investor Relations 7 Times Square, 43rd Floor New York, New York 10036 (929) 999-4055

\$200,000,000



Common Stock

PROSPECTUS SUPPLEMENT

TD Cowen

October 11, 2024