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

# SCHEDULE 14A INFORMATION

**Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934**

Filed by the Registrant ☒

Filed by a Party other than the Registrant ☐

Check the appropriate box:

☐ Preliminary Proxy Statement
☐ Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
☐ Definitive Proxy Statement
☐ Definitive Additional Materials
☒ Soliciting Material Pursuant to §240.14a-12

# DIMENSION THERAPEUTICS, INC.

**(Name of Registrant as Specified In Its Charter)**

**(Name of Person(s) Filing Proxy Statement, if other than the Registrant)**

Payment of Filing Fee (Check the appropriate box):

☒ No fee required.

☐ Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

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☐ Fee paid previously with preliminary materials.

☐ Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount Previously Paid:

(2) Form, Schedule or Registration Statement No.:

(3) Filing Party:

(4) Date Filed:

**EXPLANATORY NOTE**

On August 31, 2017, Dimension Therapeutics, Inc. (the "Company" or "Dimension") issued the following press release:


**Dimension Therapeutics Commences Patient Dosing in Global, Multi-Center Phase 1/2 Clinical Trial of DTX301 in Ornithine Transcarbamylase (OTC) Deficiency**

*Twelve trial sites recruiting patients with OTC deficiency in the United States, United Kingdom, Spain, and Canada*
*Initial data from the company's Phase 1/2 study anticipated by late 2017*

**CAMBRIDGE, Mass., August 31, 2017 (GLOBE NEWSWIRE)** — Dimension Therapeutics, Inc. (NASDAQ:DMTX), a biopharmaceutical company advancing novel, adeno-associated virus (AAV) gene therapies targeting the liver, a key organ for human metabolism, today announced the initiation of patient dosing in the company's global, multi-center Phase 1/2 clinical trial to evaluate DTX301, the only AAV gene therapy in clinical testing for the treatment of patients with Ornithine Transcarbamylase (OTC) Deficiency. DTX301 is designed to deliver stable expression and activity of OTC following a single intravenous infusion and has been shown in academic preclinical studies in relevant mouse models to normalize levels of urinary orotic acid, a marker of ammonia metabolism. In the late onset form of the disease, elevated ammonia can lead to significant medical issues for patients who are in need of better disease-modifying therapies.

"OTC deficiency is an inherited metabolic disease (IMD) for which approved therapies are unable to eliminate the risk of metabolic crises from elevated ammonia. We believe that DTX301, based on our differentiated AAV8 platform in IMD, holds great promise for addressing the unmet need among patients, and we look forward to the continued advancement of the trial," said Annalisa Jenkins, MBBS, FRCP, Chief Executive Officer of Dimension. Based on the current progress, Dimension anticipates reporting initial clinical data from the Phase 1/2 DTX301 clinical trial by late this year.

Dimension's phase 1/2 clinical trial is an open-label, dose-finding safety study of single ascending doses of DTX301 in adults with late-onset OTC Deficiency. To evaluate therapeutic response of DTX301, the trial plans to measure ammonia levels and other biomarkers, including $^{13}$C-acetate, which are established measures of OTC deficiency disease status and hepatocyte (liver) ureagenesis capacity, respectively. Additional information about Dimension's Phase 1/2 study of DTX301 may be found at ClinicalTrials.gov, using Identifier NCT: NCT02991144.

"Inherited metabolic diseases can have severe effects on patient health and quality of life, and in many of these urea cycle diseases, including OTC deficiency, the only curative option is liver transplantation, which is often associated with significant morbidity and mortality," stated Mark L. Batshaw, M.D., Executive Vice President, Physician-in-Chief & Chief Academic Officer of Children's National Medical Center and head of Dimension's Clinical Advisory Board (CAB) for urea cycle disorders.

**About DTX301**

Dimension is developing its AAV gene therapy product DTX301 for the treatment of individuals with OTC deficiency. DTX301 is designed to deliver ornithine transcarbamylase gene expression in a durable fashion, preventing or reducing the occurrence of complications associated with OTC deficiency. Preclinical studies completed to date indicate DTX301 has the potential to be a well-tolerated, effective therapy for OTC deficiency. DTX301 was granted Orphan Drug Designation in the United States and Europe in January and March 2016, respectively.

**Background on OTC Deficiency**

OTC deficiency, the most common urea cycle disorder, is caused by a genetic defect in a liver enzyme responsible for detoxification of ammonia. Individuals with OTC deficiency can build up excessive levels of ammonia in their blood, potentially resulting in neurological deficits and other toxicities. It is estimated that more than 10,000 patients are affected by OTC deficiency worldwide, of which approximately 80% are classified as late-onset, Dimension's target population. The greatest percentage of patients, including males and females, experience late-onset disease, representing a clinical spectrum of disease severity. Neonatal onset disease occurs in males, presents as severe disease, and can be fatal at an early age. Approved therapies, which must be taken multiple times a day for the patient's entire life, do not eliminate the risk of future metabolic crises. Currently, the only curative approach is liver transplantation.

**About Dimension Therapeutics, Inc.**

Dimension Therapeutics, Inc. (NASDAQ:DMTX) is a leader in discovering and developing new therapeutic products for people living with devastating rare and metabolic diseases associated with the liver, based on the most advanced mammalian adeno-associated virus (AAV) gene delivery technology. Dimension is actively progressing its broad pipeline, which features programs addressing unmet needs for patients suffering from inherited metabolic diseases, including OTC deficiency and GSDIa, and a collaboration with Bayer in hemophilia A. Dimension has initiated a phase 1/2 clinical trial with DTX301 for the treatment of OTC deficiency. The company targets diseases with readily identifiable patient populations, highly predictive preclinical models, and well-described, and often clinically validated, biomarkers. Founded in 2013, Dimension maintains headquarters in Cambridge, Massachusetts.

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**Cautionary Note Regarding Forward-Looking Statements**

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including, but not limited to, statements regarding timing and likelihood of achievement of our upcoming development milestones, including timing of disclosure of data, the expected progress of or portfolio and programs, and our ability to successfully complete, clinical studies. All such forward-looking statements are based on management's current expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. These risks and uncertainties include the risks that Dimension's product candidates, including its candidate, DTX301, will not achieve development milestones, including patient enrollment, dosing of patients, release of initial data, or regulatory filings; and the other risks described under the caption "Risk Factors" in Dimension Therapeutics' Quarterly Report on Form 10-Q for the period ended June 30, 2017, which is on file with the Securities and Exchange Commission, as well as other risks detailed in Dimension Therapeutics' additional filings with the Securities and Exchange Commission. All information in this press release is as of the date of the release, and Dimension Therapeutics undertakes no duty to update this information unless required by law.

**Additional Information about the Proposed Transaction and Where to Find It**

This communication does not constitute an offer to sell or the solicitation of an offer to buy any securities or a solicitation of any vote or approval. This document relates to a proposed transaction between Dimension Therapeutics, Inc. (the "Dimension") and REGENXBIO Inc. ("REGENXBIO"), which will become the subject of a

proxy statement/prospectus to be filed with the SEC by Dimension, and may be deemed to be solicitation material in respect of the proposed transaction. This document is not a substitute for the proxy statement/prospectus that Dimension will file with the SEC or any other documents that Dimension may file with the SEC or send to stockholders in connection with the proposed transaction. Before making any voting decision, investors and security holders are urged to carefully read the proxy statement/prospectus and all other relevant documents filed or that will be filed with the SEC in connection with the proposed transaction as they become available because they will contain important information about Dimension, REGENXBIO, the proposed transaction and related matters. Investors and security holders will be able to obtain free copies of the proxy statement/prospectus and all other relevant documents filed or that will be filed with the SEC by Dimension through the website maintained by the SEC at www.sec.gov.

In addition, investors and security holders will be able to obtain free copies of the proxy statement/prospectus, once it is filed, from Dimension by accessing Dimension's website at www.dimensiontx.com or upon written request to Dimension Therapeutics, Inc., 840 Memorial Drive, Cambridge, Massachusetts 02139.

**Participants in Solicitation**

REGENXBIO, Dimension and their respective directors and executive officers may be deemed to be participants in the solicitation of proxies from Dimension's stockholders in connection with the proposed transaction. Information regarding Dimension's directors and executive officers is contained in the proxy statement for Dimension's 2017 Annual Meeting of Stockholders, which was filed with the SEC on April 14, 2017. You can obtain a free copy of this document at the SEC's website at www.sec.gov or by accessing Dimension's website at www.dimensiontx.com. Additional information regarding the interests of those persons and other persons who may be deemed participants in the proposed transaction may be obtained by reading the proxy statement/prospectus regarding the proposed transaction when it becomes available. You may obtain free copies of this document as described in the preceding paragraph.