Dyne Therapeutics Announces FDA Breakthrough Therapy Designation for DYNE-101 and Updated Plan for Accelerated Approval in DM1 Following Type C Meeting

June 17, 2025

- Based on Type C meeting and new data, Dyne submitted revised ACHIEVE trial protocol to FDA elevating vHOT to primary endpoint for U.S. Accelerated Approval -

- New positive clinical data from Phase 1/2 ACHIEVE trial support vHOT as early indicator of clinical benefit with DYNE-101 in DM1 -

- Ongoing Registrational Expansion Cohort in ACHIEVE trial to enroll 60 participants and include sites in U.S. -

- Company to host an investor and analyst conference call today, June 17, at 8:00 a.m. ET -

WALTHAM, Mass., June 17, 2025 (GLOBE NEWSWIRE) -- Dyne Therapeutics, Inc. (Nasdaq: DYN), a clinical-stage company focused on delivering functional improvement for people living with genetically driven neuromuscular diseases, today announced that the U.S. Food and Drug Administration (FDA) has granted Breakthrough Therapy Designation to DYNE-101 for the treatment of myotonic dystrophy type 1 (DM1). The company also announced an updated plan for obtaining U.S. Accelerated Approval for DYNE-101 in DM1 following a Type C meeting with the FDA and analysis of new long-term functional data.

“After our Type C meeting, we were granted Breakthrough Therapy Designation for DYNE-101 in DM1. We appreciate the FDA’s active engagement and guidance as we advance this promising program through the Accelerated Approval pathway in the U.S.,” said John Cox, president and chief executive officer of Dyne. “Based on feedback from the FDA, along with our 6-month and new 12-month efficacy data, we have submitted a revised protocol for the ongoing Registrational Expansion Cohort of the ACHIEVE trial with vHOT as the primary endpoint for potential Accelerated Approval.”

Accelerated Approval Pathway for DYNE-101 in DM1

- In May 2025, Dyne participated in a Type C meeting with the Center for Drug Evaluation and Research (CDER) at the FDA and discussed the path to regulatory approval, including U.S. Accelerated Approval, for DYNE-101 in DM1.
  - Dyne and FDA agreed that the next step toward Accelerated Approval was to submit for review the revised protocol for the Registrational Expansion Cohort of the ACHIEVE trial with video hand opening time (vHOT) as the primary endpoint, to serve as an intermediate clinical endpoint.
  - In June, Dyne submitted the revised protocol to the FDA.
- Dyne has revised the ongoing Registrational Expansion Cohort in the ACHIEVE trial as follows:
  - The primary endpoint is change from baseline in middle finger myotonia as measured by vHOT at 6 months, compared to placebo.
  - Secondary endpoints include change from baseline in splicing as measured by the composite alternative splicing index (CASI-22), muscle strength as assessed by Quantitative Muscle Testing (QMT), performance on both the 10-Meter Walk/Run Test (10MWR) and 5 Times Sit to Stand Test (5xSTS), and the Myotonic Dystrophy Health Index (MDHI) patient reported outcome measure, all at 6 months compared to placebo.
  - This cohort is expected to enroll 60 participants, randomized 3:1 to receive DYNE-101 6.8 mg/kg Q8W or placebo.
  - Additional clinical trial sites are being added, including sites in the U.S., to support enrollment.
- Dyne intends to use data from the Registrational Expansion Cohort and from the already enrolled patients in the multiple ascending dose (MAD) and ongoing long-term extension portions of the ACHIEVE trial to support a potential submission for Accelerated Approval in the U.S.

Accelerated Approval Milestones for DYNE-101 in DM1

- Dyne plans to complete enrollment in the Registrational Expansion Cohort in Q4 2025.
- Data from this cohort are planned for mid-2026 to support a potential U.S. Accelerated Approval submission in late 2026.
- Dyne plans to initiate a confirmatory Phase 3 clinical trial in Q1 2026.
- Dyne is also pursuing expedited approval pathways globally for DYNE-101.

New Long-term Data from Multiple Ascending Dose (MAD) Portion of ACHIEVE Trial

- Today, Dyne reported new long-term data from adult DM1 patients enrolled in the randomized, placebo-controlled MAD portion of the DYNE-101 ACHIEVE trial, including data from the 6.8 mg/kg Q8W cohort (n=6) at up to 12 months.
- At the registrational dose of 6.8 mg/kg Q8W, DYNE-101 demonstrated robust and sustained improvement in myotonia as measured by vHOT as well as sustained improvements across multiple other endpoints.
- These data support improvement in vHOT as an early indicator of clinical benefit with DYNE-101 in DM1 and its potential as an intermediate clinical endpoint for U.S. Accelerated Approval.

    - As previously disclosed, treatment with DYNE-101 led to an improvement in vHOT of 3.3 seconds as compared to placebo at 6 months.
    - New data demonstrated that mean improvements at 6 months were sustained at 12 months for vHOT, 10MWR, 5xSTS, MDHI and QMT, which demonstrated a 10% improvement in strength at 6 months, increasing to 20% at 12 months relative to baseline.
- Dyne also reported updated safety and tolerability data[1] from 56 patients enrolled through the 6.8 mg/kg Q8W cohort of the ACHIEVE trial. DYNE-101 continued to demonstrate a favorable safety profile, and no related serious treatment emergent adverse events have been identified.

Updated Cash Runway Guidance

The company expects that its cash, cash equivalents and marketable securities as of March 31, 2025 will be sufficient to fund its operations into the fourth quarter of 2026. As previously reported, cash, cash equivalents and marketable securities were $677.5 million as of March 31, 2025.

Investor Conference Call

Dyne will host a conference call and webcast to discuss these updates today, June 17, 2025, at 8:00 a.m. ET and a replay will be accessible for 90 days following the presentation. An accompanying slide presentation for the event and an updated corporate presentation will also be available. To access these presentations and register for the webcast and replay, please visit the Investors & Media section of Dyne's website at https://investors.dyne-tx.com/news-and-events/events-and-presentations.

About U.S. FDA Accelerated Approval

Accelerated Approval allows the FDA to approve drugs for serious conditions with an unmet medical need based on a surrogate or intermediate clinical endpoint, which is reasonably likely to predict clinical benefit.

About Breakthrough Therapy Designation

The FDA grants Breakthrough Therapy Designation to expedite the development and review of drugs that are intended to treat a serious condition with preliminary clinical evidence indicating that the drug may demonstrate substantial improvement over available therapy on one or more clinically significant endpoints. This designation offers benefits to DYNE-101 in the U.S. including:

- Enhanced FDA support, including senior-level involvement to guide efficient development as well as decision-making
- Early and frequent communication with FDA reviewers on trial design and regulatory strategy
- Rolling and Priority Review eligibility, potentially reducing the BLA review timeline from 12 to 8 months

About DYNE-101

DYNE-101 is an investigational therapeutic being evaluated in the Phase 1/2 global ACHIEVE clinical trial for people living with DM1. DYNE-101 consists of an antisense oligonucleotide (ASO) conjugated to a fragment antibody (Fab) that binds to the transferrin receptor 1 (TfR1) to enable delivery to muscle and the central nervous system. It is designed to promote functional improvement in individuals living with DM1 by reducing toxic nuclear *DMPK* RNA and correcting the spliceopathy underlying the disease. DYNE-101 has been granted Orphan drug, Fast Track and Breakthrough Therapy designations by the U.S. Food and Drug Administration and Orphan drug designation by the European Medicines Agency for the treatment of DM1.

About Myotonic Dystrophy Type 1 (DM1)

DM1 is a rare, progressive, genetic disease that affects skeletal, cardiac and smooth muscle in addition to the central nervous system (CNS). It is a monogenic, autosomal dominant disease caused by an abnormal trinucleotide expansion in a region of the *DMPK* gene. This expansion of CTG repeats causes toxic RNA to cluster in the nucleus, forming nuclear foci and altering the splicing of multiple proteins essential for normal cellular function. This altered splicing, or spliceopathy, results in a wide range of symptoms. People living with DM1 typically experience myotonia and progressive weakness of major muscle groups, which can affect mobility, breathing, heart function, speech, digestion and vision. Cognitive dysfunction may manifest as fatigue, excessive daytime sleepiness, an apathic temperament and brain fog. DM1 is estimated to affect more than 40,000 people in the United States and over 74,000 people in Europe, but there are currently no approved disease-modifying therapies.

About Dyne Therapeutics

Dyne Therapeutics is focused on delivering functional improvement for people living with genetically driven neuromuscular diseases. We are developing therapeutics that target muscle and the central nervous system (CNS) to address the root cause of disease. The company is advancing clinical programs for myotonic dystrophy type 1 (DM1) and Duchenne muscular dystrophy (DMD), and preclinical programs for facioscapulohumeral muscular dystrophy (FSHD) and Pompe disease. At Dyne, we are on a mission to deliver functional improvement for individuals, families and communities. Learn more https://www.dyne-tx.com/, and follow us on X, LinkedIn and Facebook.

Forward-Looking Statements

This press release contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this press release, including statements regarding Dyne's strategy, future operations, prospects and plans, objectives of management, the potential of the FORCE platform and of DYNE-101, the anticipated timelines for reporting additional data from the ACHIEVE clinical trial and for the initiation of the planned phase 3 clinical trial in patients with DM1, initiating and enrolling both clinical trials, initiating additional clinical trials, and submitting applications for marketing approval, the availability of expedited approval pathways for DYNE-101, expectations regarding the outcome of interactions with regulatory authorities, and the sufficiency of Dyne's cash resources for the period anticipated, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "might," "objective," "ongoing," "plan," "predict," "project," "potential," "should," or "would," or the negative of these

terms, or other comparable terminology are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Dyne may not actually achieve the plans, intentions or expectations disclosed in these forward-looking statements, and you should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements as a result of various important factors, including: uncertainties inherent in the identification and development of product candidates, including the initiation and completion of preclinical studies and clinical trials; uncertainties as to the availability and timing of results from preclinical studies and clinical trials; the timing of and Dyne's ability to enroll patients in clinical trials; whether results from preclinical studies and data from clinical trials will be predictive of the final results of the clinical trials or other trials; whether data from clinical trials will support submission for regulatory approvals; uncertainties as to the FDA's and other regulatory authorities' interpretation of the data from Dyne's clinical trials and acceptance of Dyne's clinical programs and as to the regulatory approval process for Dyne's product candidates; whether Dyne's cash resources will be sufficient to fund its foreseeable and unforeseeable operating expenses and capital expenditure requirements; as well as the risks and uncertainties identified in Dyne's filings with the Securities and Exchange Commission (SEC), including the company's most recent Form 10-Q and in subsequent filings Dyne may make with the SEC. In addition, the forward-looking statements included in this press release represent Dyne's views as of the date of this press release. Dyne anticipates that subsequent events and developments will cause its views to change. However, while Dyne may elect to update these forward-looking statements at some point in the future, it specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing Dyne's views as of any date subsequent to the date of this press release.

1. DYNE-101 safety data as of April 23, 2025

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