Efficacy, Safety, and Tolerability of DYNE-101 in Participants with Myotonic Dystrophy Type 1

Estado	Tipo de Participantes	Rangos de Edad
Reclutando	Sujetos incapaces de otorgar consentimiento	Menores de 18 , Adultos (18-64 años) , Adolescentes (12-17 años)
Género	**Fases**	**Participantes esperados**
Ambos	Fase III	78
Resultados	**Bajo nivel intervención**	**Enfermedad rara**
Sin resultados	No	Si
Cobertura geográfica	**Ámbitos del ensayo**	**Terapia avanzada**
Sin determinar	seguridad, eficacia	NO

Información

Identificador
2025-522957-20-00 (CTIS)

Cod. Protocolo
DYNE101-DM1-301

Área terapéutica
·Enfermedades [C] - Sistema Nervioso [C10]
·Enfermedades [C] - Enfermedades musculoesqueléticas [C05]

Enfermedad investigada
Myotonic Dystrophy Type 1

Título Científico
A Phase 3, Randomized, Double-Blind, 48-Week Placebo-Controlled Study to Assess the Efficacy, Safety, and Tolerability of DYNE-101 Administered to Participants with Myotonic Dystrophy Type 1

Justificación

No aportado

Objetivo Principal

To evaluate the efficacy of DYNE 101 compared with placebo as measured by improvement in muscle function

Variables de Evaluación Primaria

5×STS time, change from baseline at Week 49

Momentos temporales de evaluación primaria

No aportado

Objetivo Secundario

1. To evaluate the efficacy of DYNE101 compared with placebo as measured by improvement in muscle parameters including myotonia, and participant-reported outcomes
2. To evaluate the plasma PK of DYNE-101
3. To evaluate the immunogenicity of DYNE-101
4. To evaluate the safety and tolerability of DYNE-101

Variables de Evaluación Secundaria

Change from baseline at Week 49 in: vHOT; middle finger QMT total CGI-C 10-MWRT velocity (m/s) PGI-C DM1-ACTIVC total score MDHI total PGI-S CGI-S 9-HPT MDHI subscale
Maximum observed drug concentration (Cmax) Time to maximum concentration (tmax) Area under the concentration-time curve (AUC) from hour 0 to the last measurable concentration (AUCtlast) AUC extrapolated to infinity (AUC) Apparent terminal elimination rate constant (Z) Apparent terminal elimination half-life (t½) Plasma clearance (CL) Volume of distribution at the terminal phase (Vz), if appropriate Volume of distribution at steady state (Vss), if appropriate
Incidence of anti-drug antibodies (ADAs)
* Treatment-emergent adverse events (TEAEs) including: - Treatment-emergent serious adverse events (SAEs) - TEAEs considered related to study drug - TEAEs leading to discontinuation from study drug and discontinuation from the study * Other clinically significant safety and tolerability observations including: - Vital sign findings - 12-lead electrocardiogram (ECG) findings -Clinical laboratory values *C-SSRS results

Momentos temporales de evaluación secundaria

No aportado

Criterios de Inclusión

1. Age 16 to 65 years at the time of signing the informed consent/assent form 8. If being treated with testosterone, on a stable replacement dose for 30 days prior to screening 9. Participants must agree to follow protocol-specified highly effective contraception guidance as described in the protocol 11. Capable of giving signed informed consent/assent as described in the protocol, which includes compliance with the requirements and restrictions listed in the informed consent form (ICF) and in the protocol and authorization to use health information that is confidential according to national and local privacy regulations 12. Willingness and ability of participant to comply with and tolerate scheduled visits, dosing administration plan, and study assessments over the duration of the study 2. Diagnosis of DM1 confirmed by molecular genetics with trinucleotide repeat size > 100. Historical results from clinical testing are acceptable 3. Clinically apparent myotonia equivalent to hand opening time of at least 3 seconds as determined by a central reading of vHOT (middle finger) values 4. Hand grip strength averaged from both sides 15% and 85% predicted of normal 5. 5×STS completion in 8 seconds without the use of assistive devices such as canes or walkers. The use of braces, such as ankle braces, and orthoses such as submalleolar orthoses, and inserts or supports that do not extend above the malleolus are permitted during testing. 6. Able to complete 10-MWRT and 5×STS without the use of assistive devices such as canes, walkers, or orthoses. The use of submalleolar orthoses and inserts or supports that do not extend above the malleolus are permitted during testing 7. Body mass index (BMI) < 35kg/m2

Criterios de Exclusión

1. Previous or ongoing medical condition, medical history, physical findings, or laboratory abnormalities that in the opinion of the Investigator could affect safety, make it unlikely that the dosing schedule and follow-up will be correctly completed, and/or impair the assessment and interpretation of study results 12. Medical condition other than DM1 that would significantly impact ambulation or participation in functional assessments 13. Uncontrolled diabetes mellitus or other serious medical illness that may complicate interpretation of safety or efficacy in the study, in the opinion of the Investigator 19. Use of glucagon-like peptide 1 (GLP-1) agonist/incretin medications including semaglutide, dulaglutide, liraglutide, exenatide, or tirzepatide within a period of 5 half-lives of the medication prior to performing screening assessments 14. Individuals with a history or presence of second- or third-degree heart block, ventricular arrhythmias, ECG with the corrected QT interval by Fridericias Formula (QTcF) 450 ms in men and QTcF 460 ms in women, PR 240 ms; left bundle-branch block, or a conduction defect that is clinically significant in the opinion of the Investigator are excluded unless they have an implanted pacemaker or defibrillator that was implanted more than 2 weeks prior to screening 15. Individuals with known structural heart disease, evidence of noncompaction cardiomyopathy, or a known (at most recent imaging) left ventricular ejection fraction of < 40% 16. Individual has a history of suicide attempt, suicidal behavior, or has any suicidal ideation within 6 months prior to Screening that meets criteria at a level of 4 or 5 of document or who, in the opinion of the Investigator, is at significant risk to commit suicide 17. Treatment with medications that can improve myotonia or clinical functional endpoints within a period of 5 half-lives of the medication prior to performing screening assessments. ay include, but not limited to, mexiletine, phenytoin, carbamazepine, procainamide, disopyramide, ranolazine, flecainide, lamotrigine, nifedipine, acetazolamide, clomipramine, imipramine, amitriptyline, taurine, or quinine 18. Current treatment with systemic immunosuppressive therapy 4. A known diagnosis of congenital DM1 2. History of major surgical procedure (based on Investigator judgment) within 12 weeks prior to the start of screening, with the exception of implanted pacemaker or defibrillator, or an expectation of a major surgical procedure during the Placebo-Controlled Period of the study (based on Investigator judgment). 10. Persistent systolic blood pressure < 90 mm Hg or signs or symptoms of hypotension or volume depletion/dehydration 3. History of DVT or PE within the last 5 years 5. History of clinically significant liver disease or ongoing treatment for liver disease or confirmed elevated ALT > 3× ULN at screening 6. History of clinically significant hematologic disease or have any of the following hematologic results at screening: platelets or hemoglobin below the lower limit of normal for age and sex 7. History of clinically significant kidney disease, ongoing treatment for kidney disease (treatment for hypertension is permitted) or eGFR < 60 mL/min as calculated with the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) Cystatin C Equation 8. Acute kidney injury within 12 weeks prior to Screening, characterized by an increase in serum creatinine of 0.3 mg/dL within 48 hours, or of 1.5-fold within a week 9. Hematuria > 5 red blood cells per high power field (RBC/HPF) on urinalysis at screening Inability to comply with physical activity requirements (eg., abstaining from strenuous

exercise) from Screening through the end of the Placebo-Controlled Period Any participant who is pregnant or breastfeeding or is planning to become pregnant during the study 20. Use of nephrotoxic medications within a period of 5 half-lives of the medication prior to performing screening assessments. These may include, but are not limited to, nonsteroidal anti-inflammatory drugs (NSAIDs), aminoglycosides (eg, gentamicin and streptomycin), bisphosphonates, and antiviral agents (eg, acyclovir and adefovir). Planned procedures that require contrast during the study are also exclusionary 11. Active malignancy or history within the last 5 years, except for basal or squamous cell carcinoma of the skin or carcinoma in situ of the cervix thathat has been successfully excised and considered cured at least 1 year prior to Screening. Participants with cancers in remission for >5 years prior to Screening may be included after discussion with the Medical Monitor. 21. Receipt of any prior gene therapy, or receipt of another investigational drug, biologic agent, or device within 5 half-lives (if known) of the agent, or within 4 months prior to the start of Screening, whichever is longer. Individuals previously treated with oligonucleotide therapies (including small interfering RNA [siRNA]) may be eligible if the last dose of the investigational drug was received 3 years ago 22. Percent predicted forced vital capacity (FVC) < 50% (sitting position) 23. Recent physical inactivity (eg, immobilization of 3 days) if, in the opinion of the Investigator, this would hinder the participant from complying with study requirements 24. Inability to undergo venipuncture successfully or tolerate venous access 25. Inability, or impaired ability, to complete study procedures and/or complete the study, due to physical or cognitive impairment or illicit drug or alcohol abuse, in the judgment of the Investigator

Calendario

(Última actualización: 07/07/2026)

Autorización	Inicio de Ensayo	Inclusión Primer Paciente	Interrumpido	Reiniciado
30/04/2026	29/05/2026	No aportado	No aportado	No aportado

Fin de reclutamiento	Fin prematuro (España)	Fin prematuro (Global)	Fin del ensayo en España	Fin del ensayo global
No aportado	No aportado	No aportado	No aportado	No aportado

Promotor

Dyne Therapeutics Inc. United States

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Contact Person

Dyne Clinical Trials

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Monetary support: N/A

Tipo de promotor: Comercial

Ceim

CEIm Hospital Universitario 12 de Octubre

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ceic@h12o.es

917792613

Centros

No iniciado (--/--/----)

Hospital Universitario Donostia

Donostia

GUIPÚZCOA

Neurology

Activo (29/05/2026)

Hospital Universitario Infanta Sofía

San Sebastian De Los Reyes

MADRID

Neurology

Medicamentos

DYNE-101
INJECTION/INFUSION
INTRAVENOUS USE

-

Principios Activos: N/A

Huérfano **Experimental**

Sin resultados

Efficacy, Safety, and Tolerability of DYNE-101 in Participants with Myotonic Dystrophy Type 1

State	Type of participants	Age Ranges
Recruiting	Incapable subjects of giving consent	Less than 18 , Adults (18-64 years) , Teens (12-17 years)
Gender	**Phases**	**Expected Participants**
Both	Phase III	78
Results	**Low level of intervention**	**Rare disease**
No results	No	Yes
Geographic coverage	**Areas of the study**	**Advanced therapy**
Undetermined	safety, effectiveness	NO

Information

Identifier
2025-522957-20-00 (CTIS)

Protocol Code
DYNE101-DM1-301

Therapeutic area
·Diseases [C] - Nervous System Diseases [C10]
·Diseases [C] - Musculoskeletal Diseases [C05]

Investigated Disease
Myotonic Dystrophy Type 1

Scientific Title
A Phase 3, Randomized, Double-Blind, 48-Week Placebo-Controlled Study to Assess the Efficacy, Safety, and Tolerability of DYNE-101 Administered to Participants with Myotonic Dystrophy Type 1

Rationale

Not provided

Main Objective

To evaluate the efficacy of DYNE 101 compared with placebo as measured by improvement in muscle function

Primary Endpoints

5×STS time, change from baseline at Week 49

Temporary moments of secondary assessment

Not provided

Secondary Objective

1. To evaluate the efficacy of DYNE101 compared with placebo as measured by improvement in muscle parameters including myotonia, and participant-reported outcomes
2. To evaluate the plasma PK of DYNE-101
3. To evaluate the immunogenicity of DYNE-101
4. To evaluate the safety and tolerability of DYNE-101

Secondary Endpoints

Change from baseline at Week 49 in: vHOT; middle finger QMT total CGI-C 10-MWRT velocity (m/s) PGI-C DM1-ACTIVC total score MDHI total PGI-S CGI-S 9-HPT MDHI subscale
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Temporary moments of secondary assessment

Not provided

Inclusion criteria

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Exclusion criteria

1. Previous or ongoing medical condition, medical history, physical findings, or laboratory abnormalities that in the opinion of the Investigator could affect safety, make it unlikely that the dosing schedule and follow-up will be correctly completed, and/or impair the assessment and interpretation of study results 12. Medical condition other than DM1 that would significantly impact ambulation or participation in functional assessments 13. Uncontrolled diabetes mellitus or other serious medical illness that may complicate interpretation of safety or efficacy in the study, in the opinion of the Investigator 19. Use of glucagon-like peptide 1 (GLP-1) agonist/incretin medications including semaglutide, dulaglutide, liraglutide, exenatide, or tirzepatide within a period of 5 half-lives of the medication prior to performing screening assessments 14. Individuals with a history or presence of second- or third-degree heart block, ventricular arrhythmias, ECG with the corrected QT interval by Fridericias Formula (QTcF) 450 ms in men and QTcF 460 ms in women, PR 240 ms; left bundle-branch block, or a conduction defect that is clinically significant in the opinion of the Investigator are excluded unless they have an implanted pacemaker or defibrillator that was implanted more than 2 weeks prior to screening 15. Individuals with known structural heart disease, evidence of noncompaction cardiomyopathy, or a known (at most recent imaging) left ventricular ejection fraction of < 40% 16. Individual has a history of suicide attempt, suicidal behavior, or has any suicidal ideation within 6 months prior to Screening that meets criteria at a level of 4 or 5 of document or who, in the opinion of the Investigator, is at significant risk to commit suicide 17. Treatment with medications that can improve myotonia or clinical functional endpoints within a period of 5 half-lives of the medication prior to performing screening assessments. ay include, but not limited to, mexiletine, phenytoin, carbamazepine, procainamide, disopyramide, ranolazine, flecainide, lamotrigine, nifedipine, acetazolamide, clomipramine, imipramine, amitriptyline, taurine, or quinine 18. Current treatment with systemic immunosuppressive therapy 4. A known diagnosis of congenital DM1 2. History of major surgical procedure (based on Investigator judgment) within 12 weeks prior to the start of screening, with the exception of implanted pacemaker or defibrillator, or an expectation of a major surgical procedure during the Placebo-Controlled Period of the study (based on Investigator judgment). 10. Persistent systolic blood pressure < 90 mm Hg or signs or symptoms of hypotension or volume depletion/dehydration 3. History of DVT or PE within the last 5 years 5. History of clinically significant liver disease or ongoing treatment for liver disease or confirmed elevated ALT > 3× ULN at screening 6. History of clinically significant hematologic disease or have any of the following hematologic results at screening: platelets or hemoglobin below the lower limit of normal for age and sex 7. History of clinically significant kidney disease, ongoing treatment for kidney disease (treatment for hypertension is permitted) or eGFR < 60 mL/min as calculated with the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) Cystatin C Equation 8. Acute kidney injury within 12 weeks prior to Screening, characterized by an increase in serum creatinine of 0.3 mg/dL within 48 hours, or of 1.5-fold within a week 9. Hematuria > 5 red blood cells per high power field (RBC/HPF) on urinalysis at screening Inability to comply with physical activity requirements (eg., abstaining from strenuous

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Calendar

(Last Update: 07/07/2026)

Authorization	Start of Trial	First patient inclusion	Halted	Restarted
30/04/2026	29/05/2026	Not aported	Not aported	Not aported

End of recruitment	Premature end (Spain)	Premature End (Global)	Trial end (Spain)	Trial end (Global)
Not aported	Not aported	Not aported	Not aported	Not aported

Sponsor

Dyne Therapeutics Inc. United States

1560 Trapelo Road

Contact Person

Dyne Clinical Trials

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Monetary support: N/A

Sponsor type: Commercial

Ceim

CEIm Hospital Universitario 12 de Octubre

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Sites

not initialized (--/--/----)

Hospital Universitario Donostia

Donostia

GUIPÚZCOA

Neurology

Active (29/05/2026)

Hospital Universitario Infanta Sofía

San Sebastian De Los Reyes

MADRID

Neurology

Medication

DYNE-101
INJECTION/INFUSION
INTRAVENOUS USE

-

Active Principles: N/A

Orphan **Experimental**

No results