Phase 2 study of the infusion of differentiated autologous T-cells from peripheral blood, expanded and transduced with a lentivirus to express a chimeric antigen receptor with anti-CD19 specificity (A3B1) conjugated with the co-stimulatory regions 4-1BB and CD3z (ARI-0001 cells) in children and adolescents aged 0-18 years with CD19+ acute lymphoblastic leukaemia resistant or refractory to treatment.

Estado	**Tipo de Participantes**	**Rangos de Edad**
Fin Reclutamiento	Sujetos incapaces de otorgar consentimiento	Menores de 18
Género	**Fases**	**Participantes esperados**
Ambos	Fase II	33
Resultados	**Bajo nivel intervención**	**Enfermedad rara**
Sin resultados	No	No
Cobertura geográfica	**Ámbitos del ensayo**	**Terapia avanzada**
Sin determinar	seguridad, eficacia	Terapia génica

Información

Identificador
2024-515467-66-00 (CTIS)

Cod. Protocolo
CART19-BE-03Ped

Transicionado 2022-001101-52

Área terapéutica
Enfermedades [C] - Cáncer [C04]|

Enfermedad investigada
Acute lymphoblastic leukemia

Título Científico

Phase 2 study of the infusion of differentiated autologous T-cells from peripheral blood, expanded and transduced with a lentivirus to express a chimeric antigen receptor with anti-CD19 specificity (A3B1) conjugated with the co-stimulatory regions 4-1BB and CD3z (ARI-0001 cells) in children and adolescents aged 0-18 years with CD19+ acute lymphoblastic leukaemia resistant or refractory to treatment.

Justificación

No aportado

Objetivo Principal

To evaluate the efficacy (response rate) of ARI-0001 cells in paediatric patients with CD19+ acute lymphoblastic leukaemia that is resistant or refractory to therapy.

Variables de Evaluación Primaria

Complete response rate (complete remission [CR] rate plus CR rate with incomplete haematological recovery [CRi]), with undetectable measurable residual disease by multiparameter flow cytometry within day +100 after the infusion of ARI-0001 cells. In patients with isolated extramedullary disease, response evaluation will be done through morphology and flow cytometry of the cerebrospinal fluid (CSF) and/or imaging tests (PET-CT or MRI)

Momentos temporales de evaluación primaria

No aportado

Objetivo Secundario

To evaluate safety and tolerability of ARI-0001 therapy
To further evaluate efficacy by evaluating duration of response and survival (event-free, relapse-free and overall survival) after ARI-0001 cell infusion
To evaluate the kinetics of ARI-0001 cells in peripheral blood, bone marrow and cerebrospinal fluid after its administration
To evaluate functional CART-cell persistence by evaluating B-cell aplasia in peripheral blood

Variables de Evaluación Secundaria

Key secondary endpoint: Event-free survival (EFS) at month 12
Duration of remission: defined as the time from achievement of CR or CRi (whichever occurs first) to relapse or death due to ALL
Relapse free survival (RFS) at 12 months
Overall survival at 12 months
Transplant and disease-free survival at 6 and 12 months
In vivo survival of ARI-0001 cells in peripheral blood as determined by flow cytometry and by qPCR of the transgene

weekly the first month, monthly in the first 6 months and then at 12 months.
B-cell aplasia, measured by flow cytometry, weekly the first month, monthly in the first 6 months, every 3 months from month 6 to month 12 and every 6 months until end of study
Toxicity, defined as adverse events of grade 3 according to common toxicity criteria (version 5.0). Adverse events of significant interest will be CRS, ICANS and cerebral ooedema, which will be graded according to the ASTCT classification (1). Procedure-related mortality will also be measured.

Momentos temporales de evaluación secundaria

No aportado

Criterios de Inclusión

Age 0 to 18 years Diagnosis of relapsed /refractory CD19+ ALL defined as at least one of the following criteria: First relapse if high-risk features. Definition of high risk 1st relapse will include at least one of the following: o any relapse before 6 months after completion of chemotherapy o high risk cytogenetics: t(4;11)(q21; q23) /AF4:: KMT2A or t (1;19) (q23; p13) / TCF3/PBX or t(17;19) (q22;p13)/ TCF3::HLF or hypodiploid (<44 chromosomes) or TP53 mutation and/ or TP53 deletion Disease burden defined as: Morphologic relapse in bone marrow (5% blasts) or presence of leukemic blasts in an extramedullary site MRD positivity (0.01%) by flow cytometry or PCR Subjects with the following features are NOT excluded: Isolated extramedullary involvement Down syndrome patients CNS3 involvement if disease is stable and a thorough evaluation of risk/benefit assessment has been stablished by the principal investigator and the treating physician Ph+ (BCR::ABL1) ALL if they are intolerant or have failed at least 1 TKI Prior blinatumomab therapy provided blasts remain CD19+ >90% blasts at inclusion Performance status: Lansky (age <16 years) or Karnofsky (age 16 years) 50% Life expectancy >3 months Adequate venous access and no contraindications for lymphoapheresis Signature of informed consent (patient and/or legal guardian)

Criterios de Exclusión

Any other concomitant neoplasia, unless it has been in complete remission for 3 years or longer Lactating or pregnant women Men or women of childbearing potential unable or unwilling to use highly efficient contraceptive measures during the study Active immunosuppressive therapy with the exception of hydrocortisone 12 mg/m2/day (or equivalent); Active acute or chronic graft versus host disease (GVHD) >grade 1 Prior therapies: CAR-T cell therapy Donor lymphocytes infusion <28 days before enrollment Immunosuppressive therapy (cyclosporine, mophetil mycophenolate and others) must be stopped <14 days before enrollment Alentuzumab, thymoglobulin (ATG) < 3 months before enrollment Active infection that is uncontrolled or requiring systemic intravenous medical therapy; Any experimental or non-commercialized therapy in the previous 4 weeks Active HIV, HBV or HCV infection Any concomitant and uncontrolled medical or psychiatric disease that, under investigator consideration, would prevent the subject from participating in the study Severe organic impairment defined by cardiac ejection fraction <50%, pulmonary reserve defined as > Grade 1 dyspnea and pulse oxygenation <91% on room air, creatinine >1.5 times greater than the upper limit of normality (ULN) for sex and age or conjugated bilirubin >2 x ULN

Calendario

(Última actualización: 16/01/2026)

Autorización	Inicio de Ensayo	Inclusión Primer Paciente	Interrumpido	Reiniciado
07/11/2022	23/03/2023	22/07/2024	No aportado	No aportado

Fin de reclutamiento	Fin prematuro (España)	Fin prematuro (Global)	Fin del ensayo en España	Fin del ensayo global
14/08/2025	No aportado	No aportado	No aportado	No aportado

Promotor

Fundacio Sant Joan De Deu Spain

Calle Santa Rosa 39-57 3a Planta

Contact Person

Clinical Trial Unit

+34936009751

frecerca.aro@sjd.es

Monetary support: N/A

Tipo de promotor: Comercial

Ceim

CEIm Fundacio Sant Joan de Deu

Santa Rosa, 39-57, 3a planta 08950 Esplugues de Llobregat

frecerca.ceic@sjd.es

Centros

Activo (06/06/2023)

Complejo Hospitalario La Paz

Madrid

MADRID

Activo (23/03/2023)

HOSPITAL DE SANT JOAN DE DEU.

Esplugues de Llobregat

BARCELONA

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

Hospital Infantil Universitario Nino Jesus

Madrid

MADRID

Haematology

Activo (30/05/2023)

HOSPITAL INFANTIL UNIVERSITARIO NIÑO JESUS

Madrid

MADRID

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

Hospital Sant Joan De Deu Barcelona

Esplugues De Llobregat

BARCELONA

Haematology

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

Hospital Universitari Vall D Hebron

Barcelona

BARCELONA

Haematology

Activo (16/11/2023)

HOSPITAL UNIVERSITARI VALL D'HEBRON

Barcelona

BARCELONA

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

Hospital Universitario La Paz

Madrid

MADRID

Haematology

Activo (23/06/2023)

HOSPITAL UNIVERSITARIO VIRGEN DEL ROCIO

Sevilla

SEVILLA

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

University Hospital Virgen Del Rocio S.L.

Sevilla

SEVILLA

Haematology

Medicamentos

Varnimcabtagene autoleucel
DISPERSION FOR INFUSION
INTRAVENOUS ADMINISTRATION

-

Principios Activos: N/A

Experimental

ALLOPURINOL
TABLET
ORAL

-

Principios Activos: N/A

Experimental

PARACETAMOL
SYRUP
ORAL AND IV

-

Principios Activos: N/A

Experimental

ETOPOSIDE
SOLUTION FOR INFUSION
INTRAVENOUS INFUSION

-

Principios Activos: N/A

Experimental

FLUDARABINE
CONCENTRATE FOR SOLUTION FOR INFUSION
INTRAVENOUS ADMINISTRATION

-

Principios Activos: N/A

Experimental

METHYLPREDNISOLONE
SOLUTION FOR INJECTION
INTRAVENOUS USE

-

Principios Activos: N/A

Experimental

CYCLOPHOSPHAMIDE
SOLUTION FOR INJECTION/INFUSION
INTRAVENOUS INFUSION

-

Principios Activos: N/A

Experimental

CYTARABINE
SOLUTION FOR INJECTION/INFUSION
INTRAVENOUS INFUSION

-

Principios Activos: N/A

Experimental

DEXCHLORPHENIRAMINE MALEATE
SYRUP
ORAL AND IV

-

Principios Activos: N/A

Experimental

TOCILIZUMAB
SOLUTION FOR INFUSION
INTRAVENOUS USE

-

Principios Activos: N/A

Experimental

HUMAN IMMUNOGLOBULIN G
SOLUTION FOR INJECTION
INTRAVENOUS

-

Principios Activos: N/A

Experimental

Sin resultados

Phase 2 study of the infusion of differentiated autologous T-cells from peripheral blood, expanded and transduced with a lentivirus to express a chimeric antigen receptor with anti-CD19 specificity (A3B1) conjugated with the co-stimulatory regions 4-1BB and CD3z (ARI-0001 cells) in children and adolescents aged 0-18 years with CD19+ acute lymphoblastic leukaemia resistant or refractory to treatment.

State	Type of participants	Age Ranges
End of recruitment	Incapable subjects of giving consent	Less than 18
Gender	**Phases**	**Expected Participants**
Both	Phase II	33
Results	**Low level of intervention**	**Rare disease**
No results	No	No
Geographic coverage	**Areas of the study**	**Advanced therapy**
Undetermined	safety, effectiveness	Gene therapy

Information

Identifier
2024-515467-66-00 (CTIS)

Protocol Code
CART19-BE-03Ped

Transitioned 2022-001101-52

Therapeutic area
Diseases [C] - Cancer [C04]|

Investigated Disease
Acute lymphoblastic leukemia

Scientific Title

Phase 2 study of the infusion of differentiated autologous T-cells from peripheral blood, expanded and transduced with a lentivirus to express a chimeric antigen receptor with anti-CD19 specificity (A3B1) conjugated with the co-stimulatory regions 4-1BB and CD3z (ARI-0001 cells) in children and adolescents aged 0-18 years with CD19+ acute lymphoblastic leukaemia resistant or refractory to treatment.

Rationale

Not provided

Main Objective

To evaluate the efficacy (response rate) of ARI-0001 cells in paediatric patients with CD19+ acute lymphoblastic leukaemia that is resistant or refractory to therapy.

Primary Endpoints

Complete response rate (complete remission [CR] rate plus CR rate with incomplete haematological recovery [CRi]), with undetectable measurable residual disease by multiparameter flow cytometry within day +100 after the infusion of ARI-0001 cells. In patients with isolated extramedullary disease, response evaluation will be done through morphology and flow cytometry of the cerebrospinal fluid (CSF) and/or imaging tests (PET-CT or MRI)

Temporary moments of secondary assessment

Not provided

Secondary Objective

To evaluate safety and tolerability of ARI-0001 therapy
To further evaluate efficacy by evaluating duration of response and survival (event-free, relapse-free and overall survival) after ARI-0001 cell infusion
To evaluate the kinetics of ARI-0001 cells in peripheral blood, bone marrow and cerebrospinal fluid after its administration
To evaluate functional CART-cell persistence by evaluating B-cell aplasia in peripheral blood

Secondary Endpoints

Key secondary endpoint: Event-free survival (EFS) at month 12
Duration of remission: defined as the time from achievement of CR or CRi (whichever occurs first) to relapse or death due to ALL
Relapse free survival (RFS) at 12 months
Overall survival at 12 months
Transplant and disease-free survival at 6 and 12 months
In vivo survival of ARI-0001 cells in peripheral blood as determined by flow cytometry and by qPCR of the transgene

weekly the first month, monthly in the first 6 months and then at 12 months.
B-cell aplasia, measured by flow cytometry, weekly the first month, monthly in the first 6 months, every 3 months from month 6 to month 12 and every 6 months until end of study
Toxicity, defined as adverse events of grade 3 according to common toxicity criteria (version 5.0). Adverse events of significant interest will be CRS, ICANS and cerebral ooedema, which will be graded according to the ASTCT classification (1). Procedure-related mortality will also be measured.

Temporary moments of secondary assessment

Not provided

Inclusion criteria

Age 0 to 18 years Diagnosis of relapsed /refractory CD19+ ALL defined as at least one of the following criteria: First relapse if high-risk features. Definition of high risk 1st relapse will include at least one of the following: o any relapse before 6 months after completion of chemotherapy o high risk cytogenetics: t(4;11)(q21; q23) /AF4:: KMT2A or t (1;19) (q23; p13) / TCF3/PBX or t(17;19) (q22;p13)/ TCF3::HLF or hypodiploid (<44 chromosomes) or TP53 mutation and/ or TP53 deletion Disease burden defined as: Morphologic relapse in bone marrow (5% blasts) or presence of leukemic blasts in an extramedullary site MRD positivity (0.01%) by flow cytometry or PCR Subjects with the following features are NOT excluded: Isolated extramedullary involvement Down syndrome patients CNS3 involvement if disease is stable and a thorough evaluation of risk/benefit assessment has been stablished by the principal investigator and the treating physician Ph+ (BCR::ABL1) ALL if they are intolerant or have failed at least 1 TKI Prior blinatumomab therapy provided blasts remain CD19+ >90% blasts at inclusion Performance status: Lansky (age <16 years) or Karnofsky (age 16 years) 50% Life expectancy >3 months Adequate venous access and no contraindications for lymphoapheresis Signature of informed consent (patient and/or legal guardian)

Exclusion criteria

Any other concomitant neoplasia, unless it has been in complete remission for 3 years or longer Lactating or pregnant women Men or women of childbearing potential unable or unwilling to use highly efficient contraceptive measures during the study Active immunosuppressive therapy with the exception of hydrocortisone 12 mg/m2/day (or equivalent); Active acute or chronic graft versus host disease (GVHD) >grade 1 Prior therapies: CAR-T cell therapy Donor lymphocytes infusion <28 days before enrollment Immunosuppressive therapy (cyclosporine, mophetil mycophenolate and others) must be stopped <14 days before enrollment Alentuzumab, thymoglobulin (ATG) < 3 months before enrollment Active infection that is uncontrolled or requiring systemic intravenous medical therapy; Any experimental or non-commercialized therapy in the previous 4 weeks Active HIV, HBV or HCV infection Any concomitant and uncontrolled medical or psychiatric disease that, under investigator consideration, would prevent the subject from participating in the study Severe organic impairment defined by cardiac ejection fraction <50%, pulmonary reserve defined as > Grade 1 dyspnea and pulse oxygenation <91% on room air, creatinine >1.5 times greater than the upper limit of normality (ULN) for sex and age or conjugated bilirubin >2 x ULN

Calendar

(Last Update: 16/01/2026)

Authorization	Start of Trial	First patient inclusion	Halted	Restarted
07/11/2022	23/03/2023	22/07/2024	Not aported	Not aported

End of recruitment	Premature end (Spain)	Premature End (Global)	Trial end (Spain)	Trial end (Global)
14/08/2025	Not aported	Not aported	Not aported	Not aported

Sponsor

Fundacio Sant Joan De Deu Spain

Calle Santa Rosa 39-57 3a Planta

Contact Person

Clinical Trial Unit

+34936009751

frecerca.aro@sjd.es

Monetary support: N/A

Sponsor type: Commercial

Ceim

CEIm Fundacio Sant Joan de Deu

Santa Rosa, 39-57, 3a planta 08950 Esplugues de Llobregat

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Sites

Active (06/06/2023)

Complejo Hospitalario La Paz

Madrid

MADRID

Active (23/03/2023)

HOSPITAL DE SANT JOAN DE DEU.

Esplugues de Llobregat

BARCELONA

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

Hospital Infantil Universitario Nino Jesus

Madrid

MADRID

Haematology

Active (30/05/2023)

HOSPITAL INFANTIL UNIVERSITARIO NIÑO JESUS

Madrid

MADRID

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

Hospital Sant Joan De Deu Barcelona

Esplugues De Llobregat

BARCELONA

Haematology

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

Hospital Universitari Vall D Hebron

Barcelona

BARCELONA

Haematology

Active (16/11/2023)

HOSPITAL UNIVERSITARI VALL D'HEBRON

Barcelona

BARCELONA

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

Hospital Universitario La Paz

Madrid

MADRID

Haematology

Active (23/06/2023)

HOSPITAL UNIVERSITARIO VIRGEN DEL ROCIO

Sevilla

SEVILLA

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

University Hospital Virgen Del Rocio S.L.

Sevilla

SEVILLA

Haematology

Medication

Varnimcabtagene autoleucel
DISPERSION FOR INFUSION
INTRAVENOUS ADMINISTRATION

-

Active Principles: N/A

Experimental

ALLOPURINOL
TABLET
ORAL

-

Active Principles: N/A

Experimental

PARACETAMOL
SYRUP
ORAL AND IV

-

Active Principles: N/A

Experimental

ETOPOSIDE
SOLUTION FOR INFUSION
INTRAVENOUS INFUSION

-

Active Principles: N/A

Experimental

FLUDARABINE
CONCENTRATE FOR SOLUTION FOR INFUSION
INTRAVENOUS ADMINISTRATION

-

Active Principles: N/A

Experimental

METHYLPREDNISOLONE
SOLUTION FOR INJECTION
INTRAVENOUS USE

-

Active Principles: N/A

Experimental

CYCLOPHOSPHAMIDE
SOLUTION FOR INJECTION/INFUSION
INTRAVENOUS INFUSION

-

Active Principles: N/A

Experimental

CYTARABINE
SOLUTION FOR INJECTION/INFUSION
INTRAVENOUS INFUSION

-

Active Principles: N/A

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DEXCHLORPHENIRAMINE MALEATE

SYRUP

ORAL AND IV

-

Active Principles: N/A

Experimental

TOCILIZUMAB

SOLUTION FOR INFUSION

INTRAVENOUS USE

-

Active Principles: N/A

Experimental

HUMAN IMMUNOGLOBULIN G

SOLUTION FOR INJECTION

INTRAVENOUS

-

Active Principles: N/A

Experimental

No results