Study of Safety, Tolerability, Pharmacodynamics and Pharmacokinetics of NIO752 in Early Alzheimer's Disease Participants

Last Update: Apr 29, 2025
A Randomized, Participant and Investigator Blinded, Placebo-Controlled Study to Evaluate the Ability of a Single Intrathecally Administered Dose of NIO752 to Lower Cerebrospinal Fluid Total Tau Levels in Participants With Early Alzheimer's Disease
ClinicalTrials.gov Identifier:
NCT05469360
Novartis Reference Number:CNIO752B12201
See if you Pre-qualify
All compounds are either investigational or being studied for (a) new use(s). Efficacy and safety have not been established. There is no guarantee that they will become commercially available for the use(s) under investigation.

Study Description

Phase 1b study to assess the pharmacodynamics, safety, tolerability, and pharmacokinetics of NIO752 in patients with early Alzheimer's disease (AD) This is a phase 1b, randomized, double-blind, placebo-controlled study, in which 36 patients with early AD will be enrolled in one of three cohorts.

Cohorts 1 \& 2 will receive a single intrathecal (IT) dose of NIO752 or placebo in the placebo-controlled part of the study, and multiple administrations of NIO752 in the open-label extension (OLE) part of the study.

Cohort 3 will receive two single IT doses of NIO752 or placebo in the placebo-controlled part of the study, and a single administration of NIO752 in the OLE part of the study.

Each cohort will enroll 12 participants, and they will be randomized into receiving NIO752 or placebo in 2:1 ratio. Participants in cohorts 1\& 2 will remain in this study for approximately \~19 months, including \~18 in-clinic follow up visits during that period of time. In cohort 3, participants will remain in this study for a follow up period of approximately \~18 months including \~10 in-clinic follow up visits.

Cohorts will be enrolled sequentially.

Participants who complete the placebo-controlled part of the study will be eligible to continue in an OLE part of the study regardless of randomization assignment in the placebo-controlled part. All OLE participants will receive either two (cohorts 1 \& 2) or one (cohort 3) dose of NIO752.

Study assessments will include physical and neurological examinations, ECGs, vital signs, standard clinical laboratory evaluations (hematology, blood chemistry, and urinalysis), routine laboratory evaluation of CSF collected through lumbar puncture, adverse event, and serious adverse event monitoring. Cohort 3 participation will also require 3 MRI scans and 3 PET scans throughout the 18 months of the study.

Condition

Alzheimer Disease, Mild Cognitive Impairment
Phase
Phase1
Overall Status
Recruiting
Number of Participants
36
Start Date
Feb 23, 2023
Completion Date
Nov 07, 2027
Gender
All
Age(s)
30 Years - 74 Years (Adult, Older Adult)

Interventions

Drug

Matching placebo

Two intrathecal injections of matching placebo
Drug

NIO752

Single intrathecal injection of NIO752 at dose C

Eligibility Criteria

Main Inclusion Criteria (placebo-controlled part):

* Between 30 to 74 years old (both inclusive) at the time of informed consent.
* A diagnosis of mild Alzheimer's Disease (AD) or mild cognitive impairment (MCI) due to AD at screening with at least a 6-month decline in cognitive function prior to screening documented in the medical record. Both participants with sporadic AD as well as Amyloid Precursor Protein (APP), Presenilin-1 (PSEN1) or Presenilin-2 (PSEN2) mutation carriers are eligible.
* Participants must have a diagnosis of MCI due to AD or mild AD at screening as defined by a Clinical Dementia Rating Scale (CDR) Global Score of 0.5 or 1 and a Memory Score ≥ 0.5.
* A history of CSF biomarkers supporting the diagnosis of AD obtained at any time point prior to screening, including CSF amyloid (amyloid-β 42 and/or 42/40 ratio) AND tau species (total tau and/or phosphorylated tau). All participants must have documented historical confirmation of both CSF biomarkers (amyloid-β and tau species) with results supporting a diagnosis of AD prior to screening. This criterion will be determined individually for each participant taking into consideration the biomarker assay used in each case. For participants (Cohorts 1 \& 2 only) with no historical CSF biomarker information, a LP for CSF collection must be performed at the screening visit. For CSF collected at screening, participants must have confirmed positivity of amyloid-β-42 ≤ 1000 pg/mL as well as positivity on, at least, one of the following Tau biomarkers: phosphorylated-tau-181 \> 12 pg/ml OR T-tau \> 149.9 pg/mL as determined by the central laboratory.

* Participant has a reliable study partner or caregiver (e.g., spouse, sibling, close friend, adult child) who, is at least 18 years old.
* Participant resides in a proximity to the study site to allow a timely unscheduled visit to the study site, if necessary.
* Participant is able to undergo lumbar puncture (LP), CSF collections, and blood draws, tolerate brain MRI and PET scanning, and able to participate and tolerate all study procedures at study visit.

Main Inclusion Criteria (OLE part):

* Signed informed consent of protocol version inclusive of the OLE.
* Participant must complete Day 170 of the placebo-controlled part of this study.

Main Exclusion Criteria (placebo-controlled part):

* Participant lives in a skilled nursing facility or dementia care facility.
* Any previous use of experimental therapy within 180 days or 5 half-lives prior to Day 1, whichever is greater. Previous exposure to anti-tau and anti-β-amyloid antibodies is allowed if at the time of screening at least 180 days have passed since the last dose. Previous exposure to amyloid vaccines or tau vaccines meant to treat AD, or previous treatment with oligonucleotides or with gene therapy at any time frame is not allowed.
* Any current or past non-AD neurological conditions.
* Other medical conditions including but not limited to poorly controlled diabetes mellitus, unstable angina, myocardial infarction, chronic heart failure, clinical significant conduction abnormalities, impaired renal or kidney function, which, in the opinion of the Investigator, would make the participant unsuitable for inclusion or could interfere with the participation in or completion of the study.
* Treatment with immunosuppressants, antipsychotics, lithium, neuroleptics, dopaminergic agonists, L-dopa, or monoamine oxidase inhibitors at the time of screening. Current use of medications, other than cholinesterase inhibitors and/or memantine, that could alter cognition, as determined by the Investigator. If the participant is receiving cholinesterase inhibitors and/or memantine, the dose must have been stable within 12 weeks prior to screening, and must remain stable during the duration of the study.
* Brain MRI at screening or within 12 months prior to screening showing evidence of cerebrovascular disease such as acute or sub-acute micro- or macrohemorrhage, significant signs of major cerebrovascular disease, or any other imaging evidence that, in the opinion of the Investigator, makes the participant unsuitable for the study.

Main Exclusion Criteria (OLE part):

* Use of any investigational drugs, or participation in a clinical trial with an investigational new drug (other than NIO752), after completing the initial placebo-controlled part of this trial
* Participants who withdrew informed consent while participating in the main placebo-controlled part of the study

France

Novartis Investigative Site

Recruiting

Lille,59037,France

Novartis Investigative Site

Recruiting

Paris,75013,France

Novartis Investigative Site

Recruiting

Toulouse Cedex 9,31059,France

Spain

Novartis Investigative Site

Recruiting

Barcelona,Catalunya,08036,Spain

Novartis Investigative Site

Recruiting

Valencia,Comunidad Valenciana,46017,Spain

Novartis Investigative Site

Recruiting

Barcelona,08041,Spain

Worldwide Contacts

If the location of your choosing does not feature any contact detail, please reach out using the information below.

Novartis Pharmaceuticals

Phone: +41613241111
Email: novartis.email@novartis.com

Source URL: *https://prod1.novartis.com/clinicaltrials/study/nct05469360*

List of links present in page

1. https://clinicaltrials.gov/ct2/show/NCT05469360
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