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A study in healthy volunteers to look at the safety and tolerability of the test medicine SBT-272 and how it is taken up by the body when given as single and multiple doses

Submission date
02/03/2022

Recruitment status
No longer recruiting

Registration date
02/03/2022

Overall study status
Completed

Last Edited
19/05/2025

Condition category
Nervous System Diseases

[X] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[_] Record updated in last year

Plain English summary of protocol

Background and study aims
The Sponsor is developing the test medicine, SBT-272, for the potential treatment of neurodegenerative diseases. This two-part healthy volunteer study is testing the safety and tolerability of single and multiple ascending doses (SAD/MAD) of the test medicine, as well as the amount of test medicine in the blood and urine over time (pharmacokinetics).

Who can participate?
Healthy male and non-pregnant, non-lactating female volunteers aged 18 to 55 years.

What does the study involve?
The study consists of 2 parts, a SAD part and a MAD part, involving up to 64 volunteers. In the SAD part, up to 40 volunteers are split into 5 cohorts to receive a single subcutaneous injection dose of SBT-272 or placebo. Volunteers enter the clinical unit on Day -1 (the day before dosing) and are discharged on Day 3 (48 hours post dose) and return for a follow up visit on Day 6. In the MAD part, up to 24 volunteers are split into 3 cohorts to receive daily doses of SBT-272 or placebo via subcutaneous injection for 7 consecutive days. Volunteers enter the clinical unit on Day -1 (the day before dosing starts) and are discharged on Day 9 (48 hours post final dose) and will return for a follow up visit on Day 11. Volunteers' blood and urine will be taken throughout the study for analysis of the test medicine and for their safety. Volunteers are expected to be involved in this study for approximately 5 weeks from screening to the follow up visit.

What are the possible risks and benefits of participating?
Participants get no medical benefit from taking part in this study. However, development of a treatment for neurodegenerative diseases may benefit the population as a whole. It is considered that the risk/benefit evaluation in this study supports the use of healthy volunteers. Full information on possible side effects is provided to volunteers in the Participant Information Sheet/Informed Consent Form. Volunteers are closely monitored during the study and safety assessments are performed regularly.

Where is the study run from?
Stealth (United States)

When is the study starting and how long is it expected to run for?
March 2022 to December 2022

Who is funding the study?
Stealth (United States)

Who is the main contact?
Anthony Abbruscato, anthony.abbruscato@stealthbt.com

Contact information

Type(s)
Public, Scientific

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Additional identifiers

Clinical Trials Information System (CTIS)
2021-004584-27

Integrated Research Application System (IRAS)
1004226

Protocol serial number
Sponsor code: SBT272-102

Study information

Scientific Title
A Phase I, Randomized, Double-Blind, Placebo-Controlled, Single and Multiple Ascending Dose-Escalation Study to Evaluate the Safety, Tolerability, and Pharmacokinetics of SBT-272 Administered via Subcutaneous Injection in Healthy Subjects

Study objectives
The trial will meet the following primary and secondary objectives:

Primary objective:
To evaluate the safety and tolerability of single and multiple ascending doses of SBT-272 administered via subcutaneous (SC) injection in healthy volunteers.

Secondary objectives:
1. To evaluate the plasma pharmacokinetics (PK) of SBT-272 in healthy volunteers following single and multiple ascending doses administered via SC injection.
2. To determine an appropriate dose range for subsequent clinical evaluation.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 28/02/2022, Fast-Track Ethics Committee (Health Research Authority, 2 Redman Place, Stratford, London, E20 1JQ,
United Kingdom; -; fasttrack.rec@hra.nhs.uk), ref: 22/FT/0019

Primary study design
Interventional

Study design
Single centre two-part double-blind randomized controlled trial

Study type(s)
Other

Health condition(s) or problem(s) studied
Neurodegenerative diseases

Interventions
Subjects receive a single subcutaneous dose of SBT-272 or placebo on one occasion in the single ascending dose (SAD) part of the study.

Subjects receive daily subcutaneous doses of SBT 272 or placebo for 7 days in the multiple ascending dose (MAD) part of the study.

Intervention Type
Drug

Phase
Phase I

Drug/device/biological/vaccine name(s)
SBT-272 (INN: bevemipretide)

Primary outcome(s)
The collective safety and tolerability profile of single and multiple ascending doses of SBT-272 compared with placebo from the time of signing the informed consent form up until discharge from the study. Variables for comparative analysis between active (by dose level) and placebo subjects within each of the SAD and MAD portions of the study:
1. Incidence, type, severity of treatment emergent adverse events
2. Vital signs parameters, including change from baseline
3. 12-lead ECG parameters, including change from baseline
4. Clinical laboratory parameters (including serum tryptase and plasma histamine), including change from baseline
5. Physical examination findings, including change from baseline

Key secondary outcome(s)
Characterization of the following PK parameters for SBT-272 in plasma where possible and appropriate using blood samples taken at multiple timepoints up to 48 hours post final dose: Cmax, Tlag, Tmax, AUC0-24, AUC0-last, AUC0-inf, AUCextrap, t1/2, λz z, CL/F, Vd/F and accumulation ratios

Completion date
06/12/2022

Eligibility

Key inclusion criteria
1. Willing and able to provide a signed informed consent form (ICF) prior to participation in any study-related procedures
2. Healthy subjects aged 18 to 55 years (inclusive) at the time of informed consent
3. Body mass index ≥18.5 and ≤32.0 kg/m2 at screening and body weight ≤120kg
4. Must, in the opinion of the PI, be in good health based upon medical history and physical examination, including lack of clinically significant abnormalities during vital signs, ECG, and laboratory assessments at screening and Day-1
5. Willing to comply with all study restrictions
6. Women of childbearing potential must confirm at least one of the following highly effective methods of birth control will be adhered to from the Screening Visit until 90 days after the last dose of IMP:
a. Abstinence from heterosexual intercourse, when it is in line with the preferred and usual lifestyle of the subject. Subject agrees to use the contraceptive methods described below should they become heterosexually active

b. Maintenance of a monogamous relationship with a male partner who has been surgically sterilized by vasectomy (the vasectomy procedure must have been conducted at least 60 days prior to the Screening Visit or confirmed via sperm analysis)
c. Barrier method (e.g., condom or occlusive cap) with spermicidal foam/gel/film/ cream AND either hormonal (may be either a combined estrogen and progesterone-containing form or a progesterone-only form) contraception (oral, implanted, or injectable) associated with inhibition of ovulation, an intrauterine device (IUD), or an intrauterine hormone-releasing system (IUS) at least 30 days prior to the Screening Visit
d. Bilateral tubal occlusion
Note: Non-childbearing potential is defined as subject confirmed:
a. Surgical sterilization (e.g., bilateral oophorectomy, hysterectomy, or bilateral salpingectomy) at least 60 days prior to the Screening Visit
b. Postmenopausal (defined as permanent cessation of menstruation for at least 12 consecutive months without an alternative medical cause prior to screening) with follicle stimulating hormone ≥ 40 mIU/mL at screening
7. Male subjects with female partners of child-bearing potential must use a condom and confirm use of another highly effective form of contraception from the Screening Visit until 90 days after the last dose of IMP:
a. Surgically sterilized by vasectomy (the vasectomy procedure must have been conducted at least 60 days prior to the Screening Visit or confirmed via sperm analysis) or having undergone bilateral tubal occlusion at least 60 days prior to the Screening Visit
b. Usage by the female partner of any form of hormonal contraception (i.e., either a combined estrogen and progesterone-containing form or a progesterone-only form, associated with inhibition of ovulation), an IUD, or an IUS plus usage by one of the partners of an additional spermicide-containing barrier method of contraception, both of which should be established prior to the start of the study (at least 30 days before screening) and continue for 90 days after the last dose of IMP
c. Alternatively, male subjects with female partners of child-bearing potential may abstain from heterosexual intercourse, when it is in line with the preferred and usual lifestyle of the subject. Subject agrees to use the methods of contraception described above should they become heterosexually active
Note: Male subjects with pregnant partners, partners of non-childbearing potential or same sex partners must use a condom from the Screening Visit until 90 days after the last dose of IMP.

Participant type(s)
Healthy volunteer

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 Years

Upper age limit
55 Years

Sex
All

Total final enrolment
60

Key exclusion criteria
1. Serum potassium, calcium or sodium outside the normal reference range at screening (unless considered not clinically significant by the PI)
a. Or any other clinically significant laboratory abnormalities as determined by the PI at screening,
2. Estimated glomerular filtration rate (eGFR) <80 mL/min/1.73m2 (calculated by the Chronic Kidney Disease Epidemiology Collaboration [CKD-EPI 2009] equation) at screening,
3. Positive for HIV-1 and 2 antibody, hepatitis B virus serum-antigen or hepatitis C virus antibody at screening,
4. A history of alcohol/drug abuse or dependence within 2 years prior to screening,
5. Subjects consuming a weekly average of greater than 14 units of alcohol (females) or 21 units of alcohol (males) within the past 2 years,
6. A history of smoking or use of tobacco- or nicotine-containing products within 6 months prior to screening,
7. A positive result on the alcohol breath test,
8. A positive urine test for drugs of abuse at screening and/or Day -1. At a minimum, samples will be assessed for amphetamines, barbiturates, cocaine, opiates, cannabinoids, benzodiazepines, and cotinine.
9. Subjects who are either unwilling to agree to, refrain from use, or found to be using:
a. Alcohol, caffeine, xanthine-containing food or beverages, and nicotine products from 24 hours prior to dosing and throughout the Treatment and Follow-Up Period,
b. Prescription and over the counter medications and herbal remedies from 14 days prior to Day 1 and until the End of Study Visit (excluding hormonal contraceptives) unless approved by the Investigator and Medical Monitor,
10. Donation of blood or blood products >400 mL within the 3 months prior to screening,
11. Fever greater than 37.5°C within 1 week of planned dosing,
12. Any disease or condition that might compromise the cardiovascular, hematological, renal, hepatic (including Gilbert's Syndrome), pulmonary (including chronic asthma), endocrine (e.g., diabetes), central nervous, or gastrointestinal (including an ulcer) systems,
13. History of seizures or history of epilepsy (including childhood febrile convulsions),
14. History of significant mental illness, at the discretion of the PI,
15. Female subjects who are pregnant (determined by serum hCG at screening and/or urine hCG at screening or Day-1), planning to become pregnant, or lactating,
16. Subject has undergone an in-patient hospitalization within 30 days prior to screening,
17. Subject has a clinically significant hypersensitivity or allergy to any pharmaceutical agent at any time,
18. Presence or history of clinically significant allergy requiring treatment, as judged by the PI. Hay fever is allowed unless it is active,
19. Clinical evidence of current or recent (< 21 days prior to screening) COVID-19 (SARS-CoV-2) infection,
20. Subject has received study medication in a clinical study within 90 days prior to screening,
21. Subject has any prior or current medical condition that, in the judgment of the PI, would prevent the subject from safely participating in and/or completing all trial requirements or failure to satisfy the PI of fitness to participate for any other reason,
22. Subjects who are study site employees, or immediate family members of a study site or sponsor employee,
23. Subjects who report to have previously received SBT-272,
24. Subjects who have previously been enrolled in this study. Subjects may only participate in

either the SAD or MAD part of the study,
25. Subjects who do not have suitable veins for multiple venipunctures/cannulation as assessed by the PI or delegate at screening,
26. Subjects who have had a COVID-19 vaccine <14 days before admission/dosing,
27. Subjects with tattoos or scars on the abdomen which may interfere with study procedures, as determined by the PI or delegate at screening,
28. Subjects who have a history of suicidal ideation or behavior as defined as a response to item 4 or 5 of the Suicidal Ideation Section of the C-SSRS of “yes” if the ideation has occurred in the past six months OR an answer of “yes” on any item within the Suicidal Behavior Section.

Date of first enrolment
09/03/2022

Date of final enrolment
06/12/2022

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Quotient Sciences Limited
Mere Way
Ruddington Fields Business Park
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NG11 6JS

Sponsor information

Organisation
Stealth BioTherapeutics (United States)

ROR
https://ror.org/045frfm13

Funder(s)

Funder type
Industry

Funder Name
Stealth BioTherapeutics Inc

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated and/or analysed during the current study are not expected to be made available because of their high commercial sensitivity and the negligible benefit to the public of publication of results of non-therapeutic clinical trials.

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
HRA research summary			28/06/2023	No	No