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A phase I/II study to evaluate the safety of and immunological response to a vaccine candidate (VLA2001) against COVID-19

Submission date
15/12/2020

Recruitment status
No longer recruiting

Registration date
17/12/2020

Overall study status
Completed

Last Edited
22/10/2026

Condition category
Infections and Infestations

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
COVID-19 is a condition caused by the coronavirus (called SARS-CoV-2) that was first identified in late 2019. This virus can infect the respiratory (breathing) system. Some people do not have symptoms but can carry the virus and pass it on to others. People who have developed the condition may develop a fever and/or a continuous cough among other symptoms. This can develop into pneumonia. Pneumonia is a chest infection where the small air pockets of the lungs, called alveoli, fill with liquid and make it more difficult to breathe.

In 2020, the virus has spread to many countries around the world and neither a vaccine against the virus or specific treatment for COVID-19 has yet been developed. As of March 2020, it is advised that people minimize travel and social contact, and regularly wash their hands to reduce the spread of the virus.

Groups who are at a higher risk from infection with the virus, and therefore of developing COVID-19, include people aged over 70 years, people who have long-term health conditions (such as asthma or diabetes), people who have a weakened immune system and people who are pregnant. People in these groups, and people who might come into contact with them, can reduce this risk by following the up-to-date advice to reduce the spread of the virus.

Valneva's vaccine candidate is called VLA2001. Valneva's first clinical study will investigate three dose levels of VLA2001 to evaluate safety and performance in a two-dose schedule. This study will enroll a healthy young adult population, prior to progression into further study stages, which will expand the upper age range and the number of subjects exposed to the vaccine.

Who can participate?
Adults aged 18 - 55 years, who have tested negative for previous SARS-CoV-2 infection.

What does the study involve?
Vaccinations will be administered at Days 1 and 22 with follow-up visits up to 6 months after the second dose.

What are the possible benefits and risks of participating?
Although the vaccine might induce immune responses that may be protective, you might not experience any direct benefit from taking part in this study. The information obtained from this study may help prevent future participants from contracting COVID-19 and will provide important information about how well people respond to VLA2001. There may be risks to being in this study, from VLA2001, from some of the procedures or tests done in this study.

Where is the study run from?
Valneva (Austria) and sites in the UK.

When is the study starting and how long is it expected to run for?
July 2020 to August 2021

Who is funding the study?
Department of Health and Social Care (UK)

Who is the main contact?
Christian Taucher, VLA2001-201@valneva.com

Contact information

Type(s)
Scientific

Contact name
Mr Christian Taucher

Contact details
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Additional identifiers

ClinicalTrials.gov (NCT)
NCT04671017

Clinical Trials Information System (CTIS)
2020-005062-33

Integrated Research Application System (IRAS)
289098

Protocol serial number
VLA2001-201

Study information

Scientific Title
A phase I/II randomized, two parts, dose-finding study to evaluate the safety, tolerability and immunogenicity of an inactivated, adjuvanted SARS-CoV-2 virus vaccine candidate (VLA2001), against COVID-19 in healthy subjects

Study objectives
The purpose of this study is to evaluate safety, tolerability and immunogenicity of VLA2001 to identify the vaccine dose for use in further development of the vaccine.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 23/11/2020, London-Brent Research Ethics Committee (Health Research Authority, Skipton House, 80 London Road, London, SE1 6LH, UK; +44 (0)20 7972 2545; hra.approval@nhs.net), ref: 20/HRA/5205

Primary study design
Interventional

Study design
Multicenter three-arm randomized dose-finding study

Study type(s)
Prevention

Health condition(s) or problem(s) studied
COVID-19 (SARS-CoV-2 infection)

Interventions
Subjects will be administered two i.m. vaccinations (Day 1 and Day 22) with VLA2001, a whole virus inactivated SARS-CoV-2 vaccine adjuvanted with cytosine phosphor-guanine (CpG) 1018 in combination with aluminum hydroxide. Except for the first 15 sentinel subjects (5 subjects/ dose group, open-label), subjects will be randomized via an interactive web response system to the low, medium or high dose group.

Subjects will be followed up in the study for approximately six months after their second vaccination.

Intervention Type
Biological/Vaccine

Phase
Phase I/II

Drug/device/biological/vaccine name(s)
VLA2001

Primary outcome(s)
1. Safety: Frequency and severity of solicited AEs (local and systemic reactions) within 7 days after any vaccination measured using case report forms
2. Immunogenicity: Geometric mean titer (GMT) for neutralizing antibodies against SARS-CoV-2 measured by neutralizing antibody titers against SARS-CoV-2 at Day 36

Key secondary outcome(s)
1. Frequency and severity of any unsolicited AE, vaccine-related AE, SAE, AESI up to day 36
2. Frequency and severity of any unsolicited AE, vaccine-related AE, SAE, AESI up to day 208
3. Measured by neutralizing antibody titers against SARS-CoV-2 at baseline and up to Day 208:
3.1. Immune response
3.2. Proportion of subjects with seroconversion
3.3. Number of SARS-CoV-2 neutralizing antibody titers
3.4. GMTs for IgG antibodies against SARS-CoV-2
3.5. Proportion of subjects with seroconversion in terms of IgG antibodies against SARS-CoV-2 (in subjects negative for SARS-CoV-2 at screening)

Completion date
31/08/2021

Eligibility

Key inclusion criteria
1. Subject is 18 to 55 years of age
2. Subject who has a smart phone and is willing and able to install and use an eDiary
3. Subject has an understanding of the study and its procedures, agrees to its provisions, and voluntarily gives written informed consent prior to any study-related procedures
4. Subject is generally healthy as determined by the Investigator
5. Subject has a Body Mass Index (BMI) of 18.0-30.0 kg/m²
6. If the subject is of childbearing potential:
6.1. Subject has practiced an adequate method of contraception during the 30 days before screening (Visit 0)
6.2. Subject has a negative serum or urine pregnancy test at screening (Visit 0) or Visit 1, respectively
6.3. Subject agrees to employ adequate birth control measures up to Day 106 (Visit 5)

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
153

Key exclusion criteria
1. Clinically significant infection or other acute illness, including fever ≥38°C within 24 hours prior to the planned study vaccination
2. History of laboratory-confirmed SARS-CoV-2 infection
3. Subject had close contact to persons with confirmed SARS-CoV-2 infection within 30 days prior to screening (Visit 0)
4. Subject has participated in a clinical study involving an investigational SARS-CoV-2 vaccine
5. Subject has an acute or recent infection not due to SARS-CoV-2
6. Subject has a history of SARS-CoV-1 or MERS infection (self-reported)
7. Subject tests positive for human immunodeficiency virus (HIV), hepatitis B surface antigen (HBsAg) or hepatitis C virus (HCV)
8. Subject has received any vaccine within 30 days prior Visit 1 other than the study intervention, with the exception of the seasonal influenza vaccination
9. Subject has abnormal findings in any required study investigations (including medical history, physical examination, and clinical laboratory) considered clinically relevant by the Investigator
10. Subjects with either medical history of or present acute or progressive, unstable or uncontrolled clinical conditions that pose a risk for participation or completion of the study, based on Investigator's clinical judgement
11. Subjects with underlying diseases with a high risk of developing severe COVID-19 symptoms if infected
12. Subject has a history of malignancy in the past 5 years other than squamous cell or basal cell skin cancer. If there has been surgical excision or treatment more than 5 years ago that is considered to have achieved a cure, the subject may be enrolled. A history of hematologic malignancy is a permanent exclusion. Subjects with a history of skin cancer must not be vaccinated at the previous tumor site
13. Subject has a known or suspected defect of the immune system, such as subjects with congenital or acquired immune deficiency
14. Subject received immuno-suppressive therapy within 4 weeks prior to Visit 1 or receipt of immunosuppressive therapy is expected during the study.
15. Subject has a history of any vaccine related contraindicating event
16. Subject presents with clinical conditions representing a contraindication to intramuscular vaccination and blood draws
17. Subject is pregnant, has plans to become pregnant up to Day 106 of the study or lactating at the time of enrolment
18. Subject has donated blood, blood fractions or plasma within 4 weeks prior to Visit 1 or received blood-derived products (e.g. plasma) within 12 weeks prior to Visit 1 in this study or plans to donate blood or use blood products during the study
19. Subject with clinically significant bleeding disorder (e.g. factor deficiency, coagulopathy or platelet disorder) or prior history of significant bleeding or bruising following IM injections or venipuncture
20. Subject has a rash, dermatological condition or tattoos that would, in the opinion of the Investigator, interfere with injection site reaction rating
21. Subject has a known or suspected problem with alcohol or drug abuse as determined by the Investigator
22. Subject has any condition that, in the opinion of the Investigator, may compromise the

subject's well-being, might interfere with evaluation of study endpoints, or would limit the subject's ability to complete the study
23. Subject is committed to an institution (by virtue of an order issued either by the judicial or the administrative authorities)
24. Subject has participated in another clinical study involving an investigational medicinal product (IMP) or device within 4 weeks prior to Visit 0 (screening) or is scheduled to participate in another clinical study involving an IMP, or device during the course of this study
25. Subject is a member of the team conducting the study or in a dependent relationship with one of the study team members

Date of first enrolment
16/12/2020

Date of final enrolment
17/01/2021

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Bristol Royal Infirmary
University Hospitals Bristol and Weston NHS Foudnation Trust
Marlborough Street
Bristol
England
BS1 3NU

Study participating centre
Queen Elizabeth Hospital Birmingham
University Hospitals Birmingham NHS Foundation Trust
Mindelsohn Way
Birmingham
England
B15 2TH

Study participating centre
Newcastle University Medical School
Freeman Hospital
Freeman Road

Newcastle
England
NE7 7DN

Study participating centre
Southampton NIHR Clinical Research Facility
-
Southampton
England
SO16 6YD

Sponsor information

Organisation
Valneva (Austria)

ROR
https://ror.org/03xk4a758

Funder(s)

Funder type
Government

Funder Name
Department of Health and Social Care

Alternative Name(s)
Department of Health & Social Care, DH

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		15/06/2022	22/10/2026	Yes	No
HRA research summary			28/06/2023	No	No
Participant information sheet		11/11/2025	11/11/2025	No	Yes
Study website		11/11/2025	11/11/2025	No	Yes