Clinical trial results:
A Multicenter, Randomized, Controlled, Double Blinded Pivotal Study to Evaluate Safety and Immunogenicity of a Live-attenuated Chikungunya Virus Vaccine Candidate (VLA1553) in Adolescents Aged 12 Years to <18 Years

PIP #: P/0457/2021 and P/0501/2023

Summary

EudraCT number	2026-000021-16
Trial protocol	Outside EU/EEA
Global end of trial date	16 February 2024

Results information

Result version number	v1 (current)
This version publication date	03 September 2026
First version publication date	03 September 2026

Trial information

Trial identification

Sponsor protocol code	VLA1553-321

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT04650399
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Valneva Austria GmbH
Sponsor organisation address	Campus Vienna Biocenter3, Vienna, Austria, 1030
Public contact	Study Director, Valneva Austria GmbH, 0043 1206200, office@valneva.com
Scientific contact	Study Director, Valneva Austria GmbH, 0043 1206200, office@valneva.com
Sponsor organisation name	Valneva Austria GmbH
Sponsor organisation address	Campus Vienna Biocenter3, Vienna, Austria, 1030
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Scientific contact	Study Director, Valneva Austria GmbH, 0043 1206200, office@valneva.com

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	Yes
EMA paediatric investigation plan number(s)	EMA/PE/0000265459

Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	23 January 2025
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	16 February 2024
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To evaluate immunogenicity and safety of the full dose of the live-attenuated CHIKV vaccine candidate (VLA1553) 28 days following vaccination in adolescents aged 12 years to <18 years after a single immunization.

Protection of trial subjects:

Informed Consent, Anonymisation of Data

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	14 February 2022
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	Yes

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Brazil: 754
Worldwide total number of subjects	754
EEA total number of subjects	0

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	0
Children (2-11 years)	0

Adolescents (12-17 years)	754
Adults (18-64 years)	0
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Overall 947 participants were screened

Pre-assignment

Screening details:

Out of the 947 screened participants, 6 were re-screened, so 941 unique participants were screened. There were 176 screen failures.

Period 1

Period 1 title	Overall trial (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator, Carer, Assessor

Arms

Are arms mutually exclusive?	Yes
Arm title	Active

Arm description:

Single intramuscular vaccination on Day 1 with VLA1553, a lyophilized live-attenuated Chikungunya vaccine candidate 1x10E4 TCID50 per dose (0.5 mL)

Arm type	Experimental
Investigational medicinal product name	Chikungunya vaccine
Investigational medicinal product code	VLA1553
Other name	
Pharmaceutical forms	Solution for injection in vial
Routes of administration	Intramuscular use

Dosage and administration details:

Single intramuscular vaccination on Day 1 with VLA1553, a lyophilized live-attenuated Chikungunya vaccine candidate 1x10E4 TCID50 per dose (0.5 mL)

Arm title	Placebo

Arm description:

Single intramuscular vaccination on Day 1 with Phosphate-Buffered Saline (PBS) as placebo (0.5 mL)

Arm type	Placebo
Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection in vial
Routes of administration	Intramuscular use

Dosage and administration details:

Single intramuscular vaccination on Day 1 with Phosphate-Buffered Saline (PBS) as placebo (0.5 mL)

Number of subjects in period 1	Active	Placebo
Started	502	252
Completed	488	246
Not completed	14	6
Consent withdrawn by subject	6	3
Consent withdrawn by parents	1	-
Lost to follow-up	7	3

Baseline characteristics

Reporting groups	
Reporting group title	Active
Reporting group description:	
Single intramuscular vaccination on Day 1 with VLA1553, a lyophilized live-attenuated Chikungunya vaccine candidate 1x10E4 TCID50 per dose (0.5 mL)	
Reporting group title	Placebo
Reporting group description:	
Single intramuscular vaccination on Day 1 with Phosphate-Buffered Saline (PBS) as placebo (0.5 mL)	

Reporting group values	Active	Placebo	Total
Number of subjects	502	252	754
Age categorical Units: Subjects			
12 -< 15 Years	244	129	373
15 -< 18Years	258	123	381
Age continuous Units: years			
geometric mean	14.5	14.4	
standard deviation	± 1.70	± 1.66	-
Gender categorical Units: Subjects			
Female	269	137	406
Male	233	115	348

Subject analysis sets	
Subject analysis set title	Safety Analysis
Subject analysis set type	Safety analysis
Subject analysis set description:	
The safety analysis population contains all subjects who entered into the study and received one vaccination.	
Subject analysis set title	Per-Protocol Analysis
Subject analysis set type	Per protocol
Subject analysis set description:	
The PP contains all IMM subjects (IMM population is defined to include all randomized and vaccinated subjects of the immunogenicity subset who have evaluable µPRNT antibody titer results at baseline and at least one post-baseline titer measurement after vaccination.) who have no major protocol deviations that could impact immune response.	

Reporting group values	Safety Analysis	Per-Protocol Analysis	
Number of subjects	754	351	
Age categorical Units: Subjects			
12 -< 15 Years	373	167	
15 -< 18Years	381	184	
Age continuous Units: years			
geometric mean	14.5	14.5	

standard deviation	± 1.68	± 1.71	

Gender categorical Units: Subjects			
Female	406	183	
Male	348	168	

End points

End points reporting groups

Reporting group title	Active
Reporting group description:	
Single intramuscular vaccination on Day 1 with VLA1553, a lyophilized live-attenuated Chikungunya vaccine candidate 1x10E4 TCID50 per dose (0.5 mL)	
Reporting group title	Placebo
Reporting group description:	
Single intramuscular vaccination on Day 1 with Phosphate-Buffered Saline (PBS) as placebo (0.5 mL)	
Subject analysis set title	Safety Analysis
Subject analysis set type	Safety analysis
Subject analysis set description:	
The safety analysis population contains all subjects who entered into the study and received one vaccination.	
Subject analysis set title	Per-Protocol Analysis
Subject analysis set type	Per protocol
Subject analysis set description:	
The PP contains all IMM subjects (IMM population is defined to include all randomized and vaccinated subjects of the immunogenicity subset who have evaluable µPRNT antibody titer results at baseline and at least one post-baseline titer measurement after vaccination.) who have no major protocol deviations that could impact immune response.	

Primary: Seroresponse

End point title	Seroresponse[1]
End point description:	
Percentage of subjects with seroresponse CHIKV antibody level determined as µPRNT50>= 150 (Micro Plaque Reduction Neutralization Test 50%) for baseline negative subjects 28 days post-vaccination.	
End point type	Primary
End point timeframe:	
Day 29 after single vaccination	

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: here a subset for baseline negative subjects was used

End point values	Active	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	251	42		
Units: percentage of participants				
number (not applicable)	98.8	2.4		

Statistical analyses

No statistical analyses for this end point

Secondary: CHIKV-specific Antibody Titers as GMTs up to 1 Year

End point title	CHIKV-specific Antibody Titers as GMTs up to 1 Year
End point description:	
Immune response as measured by CHIKV-specific neutralizing antibody titers on Day 1, Day 8, Day 29,	

Day 85, Day
180 (Month 6) and Day 365 (Month 12) post vaccination as determined by µPRNT

End point type	Secondary

End point timeframe:

Day 1, Day 8, Day 29, Day 85, Day 180 (Month 6) and Day 365 (Month 12) post vaccination

End point values	Active	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	251	42		
Units: units on a scale				
geometric mean (confidence interval 95%)				
Day 1	10.6 (10.31 to 10.89)	11.7 (10.46 to 13.17)		
Day 8	17.6 (15.41 to 20.06)	10.6 (9.75 to 11.44)		
Day 29	3855.9 (3432.05 to 4331.98)	12.3 (9.63 to 15.79)		
Day 85	1704.30 (1547.68 to 1876.82)	10.0 (10.0 to 10.0)		
Day 180	1359.9 (1222.34 to 1512.87)	10.0 (10.0 to 10.0)		
Day 365	1283.9 (1145.99 to 1438.45)	10.0 (10.0 to 10.0)		

Statistical analyses

No statistical analyses for this end point

Secondary: Seroresponse up to 1 Year

End point title	Seroresponse up to 1 Year

End point description:

Percentage of subjects with seroresponse defined as µPRNT50 ≥ 150 for µPRNT baseline negative subjects on Day 8, Day 85, Day 180 and Month 12 post-vaccination as determined by µPRNT

End point type	Secondary

End point timeframe:

Day 8, Day 85, Day 180, and Month 12 after vaccination

End point values	Active	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	251	42		
Units: percentage of participants				
number (not applicable)				
Day 8	5.7	0.0		
Day 85	99.2	0.0		
Day 180	98.8	0.0		
Day 365	98.3	0.0		

Statistical analyses

No statistical analyses for this end point

Secondary: Seroconversion up to 1 Year Defined as > 4-fold Increase of µPRNT50 Compared to Baseline

End point title	Seroconversion up to 1 Year Defined as > 4-fold Increase of µPRNT50 Compared to Baseline

End point description:

Percentage of subjects with seroconversion defined as > 4-fold increase of µPRNT50 compared to baseline at Day 29, Month 6 and Month 12 as determined by µPRNT assay in µPRNT baseline seronegative subjects

End point type	Secondary

End point timeframe:

12 months after vaccination

End point values	Active	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	251	42		
Units: precentage of participants				
number (not applicable)				
Day 29	98.8	2.38		
Day 180	99.18	0.0		
Day 365	99.15	0.0		

Statistical analyses

No statistical analyses for this end point

Secondary: Fold Change in Neutralizing Antibodies Compared to Baseline

End point title	Fold Change in Neutralizing Antibodies Compared to Baseline

End point description:

Fold change of CHIKV-specific neutralizing antibody titers determined by µPRNT assay in µPRNT baseline seronegative subjects at Days 8, 29, 85, 180 and at Month 12 post-vaccination as compared to baseline

End point type	Secondary

End point timeframe:

up to 12 months after vaccination

End point values	Active	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	251	42		
Units: fold change				
geometric mean (standard deviation)				
Day 8	8.18 (± 49.483)	0.93 (± 0.201)		
Day 29	495.60 (± 379.063)	4.05 (± 19.660)		
Day 85	202.73 (± 141.663)	0.90 (± 0.235)		
Day 180	177.17 (± 180.146)	0.90 (± 0.235)		
Day 365	165.51 (± 147.792)	0.91 (± 0.215)		

Statistical analyses

No statistical analyses for this end point

Secondary: percentage of participants reaching a pre-specified change in Neutralizing Antibody Titers at Month 12 Compared to Baseline

End point title	percentage of participants reaching a pre-specified change in Neutralizing Antibody Titers at Month 12 Compared to Baseline

End point description:

Percentage of subjects reaching an at least 4-fold, 8-fold, 16-fold or 64-fold change in CHIKV-specific neutralizing antibody titer compared to baseline as measured by µPRNT assay in µPRNT baseline seronegative subjects

End point type	Secondary

End point timeframe:

12 months after vaccination

End point values	Active	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	251	42		
Units: percentage of participants				
number (not applicable)				
4-fold change - GMT: reached	99.15	0		
8-fold change - GMT: reached	98.73	0		
16-fold change - GMT: reached	98.31	0		
64-fold change - GMT: reached	82.2	0		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participants With Unsolicited Adverse Events

End point title	Number of Participants With Unsolicited Adverse Events
End point description:	
Frequency of unsolicited AEs at Day 29 and Month 6 post-vaccination	
End point type	Secondary
End point timeframe:	
up to 6 months after vaccination	

End point values	Active	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	502	252		
Units: participants				
number (not applicable)				
Day 29	196	81		
Day 180	309	148		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participants With Solicited Adverse Events

End point title	Number of Participants With Solicited Adverse Events
End point description:	
Frequency of solicited injection site and systemic adverse events within ten days post-vaccination	
End point type	Secondary
End point timeframe:	
up to 10 days after vaccination	

End point values	Active	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	502	252		
Units: participants				
number (not applicable)				
Any solicited systemic adverse Event	319	107		
Any solicited injection site adverse event	160	62		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participants With Adverse Event of Special Interest

End point title	Number of Participants With Adverse Event of Special Interest

End point description:

Frequency of any Adverse Event of Special Interest:
The following cluster of symptoms with or without remissions or exacerbations received particular consideration and were defined as early onset AESI:
1. Fever (≥37.8°C measured axillary); and
2. Acute (poly)arthralgia/arthritis, myalgia, neurological symptoms (e.g., meningoencephalitis, acute encephalitis, headache, seizures), retinitis/uveitis; or one or more of the following signs and symptoms: macular to maculopapular rash (sometimes with cutaneous pruritus (foot plant)), pigmentary changes, bullous rash/skin blistering, purpura and ecchymosis; and
3. Onset of symptoms 2 to 21 days after vaccination (i.e., Day 3 to Day 22); and
4. Duration of event ≥3 days, Onset of symptoms 22 days post vaccination or later (Day 23 – study end) was defined as late onset AESI.

End point type	Secondary

End point timeframe:

until 12 month after vaccination

End point values	Active	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	502	252		
Units: participants				
number (not applicable)				
Early Onset AESI	17	2		
Late Onset AESI	38	17		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participants With Serious Adverse Events

End point title	Number of Participants With Serious Adverse Events

End point description:

Frequency and relatedness of any Serious Adverse Event (SAE) during the entire study period

End point type	Secondary

End point timeframe:

until 12 months after vaccination

End point values	Active	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	502	252		
Units: participants				
number (not applicable)				
Frequency of SAE	11	5		
Frequency of related SAE	1	0		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

up to 10 days after vaccination - Solicited Adverse Events
up to 6 months after vaccinattion - Unsolicited Adverse Events
up to 12 months after vaccination - Serious Adverse Events and Adverse Event of Special Interest

Assessment type	Systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	24.1

Reporting groups

Reporting group title	Active

Reporting group description:

Single intramuscular vaccination on Day 1 with VLA1553, a lyophilized live-attenuated Chikungunya vaccine candidate 1x10E4 TCID50 per dose

Reporting group title	Placebo

Reporting group description:

Single intramuscular vaccination on Day 1 with Phosphate-Buffered Saline (PBS) as placebo

Serious adverse events	Active	Placebo	
Total subjects affected by serious adverse events			
subjects affected / exposed	11 / 502 (2.19%)	5 / 252 (1.98%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	
Investigations			
Prothrombin time prolonged			
subjects affected / exposed	0 / 502 (0.00%)	1 / 252 (0.40%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Transaminase increase			
subjects affected / exposed	0 / 502 (0.00%)	1 / 252 (0.40%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Injury, poisoning and procedural complications			
Arthropod sting			
alternative assessment type: Non-systematic			

subjects affected / exposed	1 / 502 (0.20%)	0 / 252 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Lower limb fracture			
alternative assessment type: Non-systematic			
subjects affected / exposed	1 / 502 (0.20%)	0 / 252 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Nervous system disorders			
Juvenile myoclonic epilepsy			
alternative assessment type: Non-systematic			
subjects affected / exposed	1 / 502 (0.20%)	0 / 252 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Seizure			
alternative assessment type: Non-systematic			
subjects affected / exposed	1 / 502 (0.20%)	0 / 252 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Blood and lymphatic system disorders			
Neutropenia			
subjects affected / exposed	1 / 502 (0.20%)	0 / 252 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
General disorders and administration site conditions			
Pyrexia			
subjects affected / exposed	1 / 502 (0.20%)	0 / 252 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Psychiatric disorders			
Suicidal ideation			
alternative assessment type: Non-systematic			

subjects affected / exposed	0 / 502 (0.00%)	1 / 252 (0.40%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Appendicitis			
alternative assessment type: Non-systematic			
subjects affected / exposed	1 / 502 (0.20%)	0 / 252 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cat scratch disease			
alternative assessment type: Non-systematic			
subjects affected / exposed	1 / 502 (0.20%)	0 / 252 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Dengue fever			
alternative assessment type: Non-systematic			
subjects affected / exposed	0 / 502 (0.00%)	1 / 252 (0.40%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastroenteritis			
alternative assessment type: Non-systematic			
subjects affected / exposed	1 / 502 (0.20%)	0 / 252 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pharyngitis			
alternative assessment type: Non-systematic			
subjects affected / exposed	0 / 502 (0.00%)	1 / 252 (0.40%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumonia			
alternative assessment type: Non-systematic			

subjects affected / exposed	1 / 502 (0.20%)	1 / 252 (0.40%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Metabolism and nutrition disorders			
Hyperkalemia			
subjects affected / exposed	1 / 502 (0.20%)	0 / 252 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

Frequency threshold for reporting non-serious adverse events: 5 %

Non-serious adverse events	Active	Placebo	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	396 / 502 (78.88%)	171 / 252 (67.86%)	
Nervous system disorders			
Headache			
subjects affected / exposed	284 / 502 (56.57%)	114 / 252 (45.24%)	
occurrences (all)	393	160	
General disorders and administration site conditions			
Fatigue			
subjects affected / exposed	117 / 502 (23.31%)	30 / 252 (11.90%)	
occurrences (all)	123	32	
Injection site pain			
subjects affected / exposed	149 / 502 (29.68%)	55 / 252 (21.83%)	
occurrences (all)	198	72	
Pyrexia			
subjects affected / exposed	194 / 502 (38.65%)	68 / 252 (26.98%)	
occurrences (all)	276	86	
Gastrointestinal disorders			
Nausea			
subjects affected / exposed	99 / 502 (19.72%)	41 / 252 (16.27%)	
occurrences (all)	108	49	
Odynophagia			
alternative assessment type: Non-systematic			

subjects affected / exposed	44 / 502 (8.76%)	26 / 252 (10.32%)	
occurrences (all)	52	36	
Vomiting			
subjects affected / exposed	30 / 502 (5.98%)	24 / 252 (9.52%)	
occurrences (all)	34	28	
Respiratory, thoracic and mediastinal disorders			
Cough			
alternative assessment type: Non-systematic			
subjects affected / exposed	50 / 502 (9.96%)	26 / 252 (10.32%)	
occurrences (all)	61	35	
Oropharyngeal pain			
alternative assessment type: Non-systematic			
subjects affected / exposed	24 / 502 (4.78%)	17 / 252 (6.75%)	
occurrences (all)	25	17	
Rhinorrhoea			
alternative assessment type: Non-systematic			
subjects affected / exposed	19 / 502 (3.78%)	16 / 252 (6.35%)	
occurrences (all)	23	18	
Musculoskeletal and connective tissue disorders			
Arthralgia			
subjects affected / exposed	74 / 502 (14.74%)	19 / 252 (7.54%)	
occurrences (all)	75	20	
Myalgia			
subjects affected / exposed	162 / 502 (32.27%)	49 / 252 (19.44%)	
occurrences (all)	186	61	
Infections and infestations			
Influenza			
alternative assessment type: Non-systematic			
subjects affected / exposed	40 / 502 (7.97%)	18 / 252 (7.14%)	
occurrences (all)	47	18	
Rhinitis			
alternative assessment type: Non-systematic			
subjects affected / exposed	19 / 502 (3.78%)	14 / 252 (5.56%)	
occurrences (all)	22	19	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported