Clinical trial results:
Epicutaneous Immunotherapy (EPIT) for Peanut Allergy: A Randomized, Double-Blind, Placebo-Controlled Phase I Safety Study in Adult and Pediatric Subjects

Summary

EudraCT number	2018-000868-29
Trial protocol	Outside EU/EEA
Global end of trial date	27 February 2012

Results information

Result version number	v1 (current)
This version publication date	04 October 2022
First version publication date	04 October 2022
Summary attachment (see zip file)	V712-101 CSR Synopsis (V712-101-synopsis_Redacted.pdf)

Trial information

Trial identification

Sponsor protocol code	V712-101

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT01170286
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	DBV Technologies
Sponsor organisation address	177/181 Avenue Pierre Brossolette, Montrouge, France, 92120
Public contact	Chief Medical Officer, DBV Technologies, +33 1 55 42 78 78, clinicaltrials@dbv-technologies.com
Scientific contact	Chief Medical Officer, DBV Technologies, +33 1 55 42 78 78, clinicaltrials@dbv-technologies.com

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	Yes
EMA paediatric investigation plan number(s)	EMEA-001481-PIP01-13
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	27 February 2012
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	27 February 2012
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To assess the safety and tolerability of repeated application of Viaskin™ patch (DBV712) in adult, adolescent, and child subjects with a known allergy to peanuts.

Protection of trial subjects:

The Investigators obtained consent from each participant in the study, in accordance with the International Council for Harmonization-Good Clinical Practice Guidelines, the Declaration of Helsinki, and applicable regulatory requirements, prior to entering the study. Participants were informed of the nature of the study, its aim, its possible risks and restrictions, its duration, and the compensation that they were to receive. Participants were required to read, sign, and date the Institutional Review Board (IRB)-approved consent form. Children aged 6 to 11 years were required to sign a separate child assent form. Adolescents 12 to 17 years of age were also given the option of signing the Informed Consent Form (ICF) child assent line. The parents or legal representative(s) of all minors, regardless of age, were also required to sign the ICF.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	21 July 2010
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	United States: 100
Worldwide total number of subjects	100
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)	10
Adolescents (12-17 years)	20

Adults (18-64 years)	70
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

This Phase 1, placebo-controlled, dose-escalation safety study was conducted in adults, adolescents and children at 5 centers in the United States. The study included severe (anaphylaxis reactions of grade 4 or 5) and nonsevere (anaphylaxis reactions grade ≤3) peanut allergic adults and only nonsevere peanut adolescents and children.

Pre-assignment

Screening details:

The study included 3 periods; Screening period (up to 90 days), Treatment period (15 days) and Follow-up period (7 days after last dose). A total of 100 participants were enrolled in this study.

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, Monitor, Carer

Arms

Are arms mutually exclusive?	Yes
Arm title	Viaskin™ Peanut: All Participants

Arm description:

Participants applied Viaskin™ Peanut patches (20 microgram [mcg], 100 mcg, 250 mcg, and 500 mcg) on intact skin either daily for 24 hours or every other day for 48 hours for 2 weeks. The recommended starting dose of Viaskin™ Peanut was 20 mcg and dose escalated up to 500 mcg.

Arm type	Experimental
Investigational medicinal product name	Viaskin™ Peanut
Investigational medicinal product code	DBV712
Other name	
Pharmaceutical forms	Cutaneous patch
Routes of administration	Epicutaneous use

Dosage and administration details:

Viaskin™ Peanut epicutaneous patch containing a solid deposit of formulated peanut protein extract applied on intact skin either daily for 24 hours or every other day for 48 hours for 2 weeks. The drug substance is an unmodified, lyophilized peanut extract produced from the extraction and freeze drying of defatted peanut flour.

Arm title	Placebo: All Participants

Arm description:

Participants applied placebo patches on intact skin either daily for 24 hours or every other day for 48 hours for 2 weeks.

Arm type	Placebo
Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Cutaneous patch
Routes of administration	Epicutaneous use

Dosage and administration details:

Placebo epicutaneous patch applied on intact skin either daily for 24 hours or every other day for 48 hours for 2 weeks.

Number of subjects in period 1	Viaskin™ Peanut: All Participants	Placebo: All Participants
Started	80	20
Completed	77	19
Not completed	3	1
Protocol noncompliance	-	1
Consent withdrawn by subject	1	-
Adverse event, non-fatal	2	-

Baseline characteristics

Reporting groups	
Reporting group title	Viaskin™ Peanut: All Participants
Reporting group description:	
Participants applied Viaskin™ Peanut patches (20 microgram [mcg], 100 mcg, 250 mcg, and 500 mcg) on intact skin either daily for 24 hours or every other day for 48 hours for 2 weeks. The recommended starting dose of Viaskin™ Peanut was 20 mcg and dose escalated up to 500 mcg.	
Reporting group title	Placebo: All Participants
Reporting group description:	
Participants applied placebo patches on intact skin either daily for 24 hours or every other day for 48 hours for 2 weeks.	

Reporting group values	Viaskin™ Peanut: All Participants	Placebo: All Participants	Total
Number of subjects	80	20	100
Age categorical Units: Subjects			
In utero			0
Preterm newborn infants (gestational age < 37 wks)			0
Newborns (0-27 days)			0
Infants and toddlers (28 days-23 months)			0
Children (2-11 years)			0
Adolescents (12-17 years)			0
Adults (18-64 years)			0
From 65-84 years			0
85 years and over			0
Age continuous Units: years			
arithmetic mean	24.7	22.2	
standard deviation	± 11.56	± 9.18	-
Gender categorical Units: Subjects			
Female	30	10	40
Male	50	10	60
Race Units: Subjects			
White	62	16	78
Black	16	3	19
Asian	1	0	1
Other	1	1	2
Ethnicity Units: Subjects			
Hispanic	4	2	6
Non-Hispanic	76	18	94

End points

End points reporting groups

Reporting group title	Viaskin™ Peanut: All Participants
Reporting group description:	
Participants applied Viaskin™ Peanut patches (20 microgram [mcg], 100 mcg, 250 mcg, and 500 mcg) on intact skin either daily for 24 hours or every other day for 48 hours for 2 weeks. The recommended starting dose of Viaskin™ Peanut was 20 mcg and dose escalated up to 500 mcg.	
Reporting group title	Placebo: All Participants
Reporting group description:	
Participants applied placebo patches on intact skin either daily for 24 hours or every other day for 48 hours for 2 weeks.	

Primary: Number of Participants With Treatment-Emergent Adverse Events (TEAEs) and Serious TEAEs

End point title	Number of Participants With Treatment-Emergent Adverse Events (TEAEs) and Serious TEAEs[1]
End point description:	
The TEAEs were defined as adverse events (AEs), regardless of relationship to study drug, which occurred during or after initial Viaskin™ patch application, or any event already present before randomization that worsened in either intensity or frequency following exposure to Viaskin™ patch. A serious AE was defined as any untoward medical occurrence at any dose that resulted in death, was life threatening, required inpatient hospitalization or prolongation of existing hospitalization, resulted in persistent or significant disability/incapacity, was a congenital anomaly/birth defect, or was an important medical event.	
End point type	Primary
End point timeframe:	
From Day 1 up to end of study, approximately 22 days	

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: Only descriptive statistical analysis was performed for the primary endpoint.

End point values	Viaskin™ Peanut: All Participants	Placebo: All Participants		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	80	20		
Units: participants				
TEAEs	75	15		
Serious TEAEs	0	0		

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Participants Treated for Systemic Reactions of Special Interest Related to DBV712 Treatment

End point title	Percentage of Participants Treated for Systemic Reactions of Special Interest Related to DBV712 Treatment

End point description:

Any occurrence of anaphylaxis or systemic allergic reactions directly related to DBV712 application was considered an AE of special interest. The safety analysis set included all randomized participants who received any amount of study drug.

End point type	Secondary

End point timeframe:

From Day 1 up to end of study, approximately 22 days

End point values	Viaskin™ Peanut: All Participants	Placebo: All Participants		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	80	20		
Units: percentage of participants				
number (not applicable)	11.3	5.0		

Statistical analyses

No statistical analyses for this end point

Secondary: Overall Compliance to the Study Treatment

End point title	Overall Compliance to the Study Treatment

End point description:

Overall adherence to the study treatment, as measured by compliance, was assessed by study drug accountability information, which was recorded on the Viaskin™ accountability case report form. For participants under the 24-hour regimen, it was calculated as 100*(total number of Viaskin™ patches used)/(duration of exposure -1) and for participants under the 48-hour regimen, it was calculated as 100*2*(total number of Viaskin™ patches used)/(duration of exposure -1). The safety analysis set included all randomized participants who received any amount of study drug.

End point type	Secondary

End point timeframe:

From Day 1 to Day 15

End point values	Viaskin™ Peanut: All Participants	Placebo: All Participants		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	79	20		
Units: percentage of epicutaneous patches				
arithmetic mean (standard deviation)	100.18 (± 4.568)	101.07 (± 3.494)		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events:	
TEAEs were collected from Day 1 up to end of study, approximately 22 days.	
Adverse event reporting additional description:	
The safety analysis set included all randomized participants who received any amount of study drug.	
Assessment type	Systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	13.0

Reporting groups	
Reporting group title	Viaskin™ Peanut: All Participants
Reporting group description:	
Participants applied Viaskin™ Peanut patches (20 mcg, 100 mcg, 250 mcg, and 500 mcg) on intact skin either daily for 24 hours or every other day for 48 hours for 2 weeks. The recommended starting dose of Viaskin™ Peanut was 20 mcg and dose escalated up to 500 mcg.	
Reporting group title	Placebo: All Participants
Reporting group description:	
Participants applied placebo patches on intact skin either daily for 24 hours or every other day for 48 hours for 2 weeks.	

Serious adverse events	Viaskin™ Peanut: All Participants	Placebo: All Participants	
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 80 (0.00%)	0 / 20 (0.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	

Frequency threshold for reporting non-serious adverse events: 0 %

Non-serious adverse events	Viaskin™ Peanut: All Participants	Placebo: All Participants	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	75 / 80 (93.75%)	15 / 20 (75.00%)	
Injury, poisoning and procedural complications			
Arthropod bite			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Contusion			

subjects affected / exposed	0 / 80 (0.00%)	1 / 20 (5.00%)	
occurrences (all)	0	1	
Heat exhaustion			
subjects affected / exposed	0 / 80 (0.00%)	1 / 20 (5.00%)	
occurrences (all)	0	1	
Joint sprain			
subjects affected / exposed	0 / 80 (0.00%)	1 / 20 (5.00%)	
occurrences (all)	0	1	
Vascular disorders			
Pallor			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Nervous system disorders			
Headache			
subjects affected / exposed	7 / 80 (8.75%)	6 / 20 (30.00%)	
occurrences (all)	12	6	
Migraine			
subjects affected / exposed	2 / 80 (2.50%)	0 / 20 (0.00%)	
occurrences (all)	2	0	
Paraesthesia mucosal			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
General disorders and administration site conditions			
Application site pruritus			
subjects affected / exposed	66 / 80 (82.50%)	10 / 20 (50.00%)	
occurrences (all)	641	68	
Application site erythema			
subjects affected / exposed	56 / 80 (70.00%)	5 / 20 (25.00%)	
occurrences (all)	508	13	
Application site urticaria			
subjects affected / exposed	40 / 80 (50.00%)	3 / 20 (15.00%)	
occurrences (all)	273	7	
Application site oedema			
subjects affected / exposed	38 / 80 (47.50%)	1 / 20 (5.00%)	
occurrences (all)	194	1	
Application site anaesthesia			

subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Chest discomfort			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Influenza like illness			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Pyrexia			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Application site pain			
subjects affected / exposed	0 / 80 (0.00%)	1 / 20 (5.00%)	
occurrences (all)	0	1	
Immune system disorders			
Allergy to animal			
subjects affected / exposed	2 / 80 (2.50%)	0 / 20 (0.00%)	
occurrences (all)	2	0	
Anaphylactic reaction			
subjects affected / exposed	1 / 80 (1.25%)	1 / 20 (5.00%)	
occurrences (all)	2	3	
Food allergy			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Hypersensitivity			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Eye disorders			
Eye oedema			
subjects affected / exposed	2 / 80 (2.50%)	0 / 20 (0.00%)	
occurrences (all)	2	0	
Eye pruritus			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Eyelid oedema			

subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Lacrimation increased			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Orbital oedema			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Gastrointestinal disorders			
Abdominal discomfort			
subjects affected / exposed	2 / 80 (2.50%)	0 / 20 (0.00%)	
occurrences (all)	2	0	
Vomiting			
subjects affected / exposed	2 / 80 (2.50%)	0 / 20 (0.00%)	
occurrences (all)	2	0	
Abdominal pain upper			
subjects affected / exposed	1 / 80 (1.25%)	2 / 20 (10.00%)	
occurrences (all)	1	3	
Lip oedema			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Mouth ulceration			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Nausea			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Respiratory, thoracic and mediastinal disorders			
Nasal congestion			
subjects affected / exposed	4 / 80 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	5	0	
Oropharyngeal pain			
subjects affected / exposed	3 / 80 (3.75%)	0 / 20 (0.00%)	
occurrences (all)	3	0	
Rhinorrhoea			

subjects affected / exposed	3 / 80 (3.75%)	0 / 20 (0.00%)	
occurrences (all)	3	0	
Cough			
subjects affected / exposed	2 / 80 (2.50%)	0 / 20 (0.00%)	
occurrences (all)	2	0	
Epistaxis			
subjects affected / exposed	2 / 80 (2.50%)	0 / 20 (0.00%)	
occurrences (all)	3	0	
Dyspnoea			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Rhinalgia			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Sneezing			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Throat irritation			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Wheezing			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	2	0	
Skin and subcutaneous tissue disorders			
Pruritus			
subjects affected / exposed	2 / 80 (2.50%)	0 / 20 (0.00%)	
occurrences (all)	2	0	
Rash			
subjects affected / exposed	2 / 80 (2.50%)	0 / 20 (0.00%)	
occurrences (all)	2	0	
Urticaria			
subjects affected / exposed	2 / 80 (2.50%)	1 / 20 (5.00%)	
occurrences (all)	2	1	
Dermatitis atopic			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	

Eczema			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Dermatitis contact			
subjects affected / exposed	0 / 80 (0.00%)	1 / 20 (5.00%)	
occurrences (all)	0	1	
Renal and urinary disorders			
Haematuria			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Musculoskeletal and connective tissue disorders			
Musculoskeletal stiffness			
subjects affected / exposed	2 / 80 (2.50%)	0 / 20 (0.00%)	
occurrences (all)	2	0	
Back pain			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Pain in extremity			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Neck pain			
subjects affected / exposed	0 / 80 (0.00%)	1 / 20 (5.00%)	
occurrences (all)	0	2	
Infections and infestations			
Nasopharyngitis			
subjects affected / exposed	4 / 80 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	4	0	
Upper respiratory tract infection			
subjects affected / exposed	2 / 80 (2.50%)	0 / 20 (0.00%)	
occurrences (all)	2	0	
Gastroenteritis viral			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Pharyngitis streptococcal			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	

Sinusitis			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Viral upper respiratory tract infection			
subjects affected / exposed	1 / 80 (1.25%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Arthritis infective			
subjects affected / exposed	0 / 80 (0.00%)	1 / 20 (5.00%)	
occurrences (all)	0	1	
Oral herpes			
subjects affected / exposed	0 / 80 (0.00%)	1 / 20 (5.00%)	
occurrences (all)	0	1	
Skin infection			
subjects affected / exposed	0 / 80 (0.00%)	1 / 20 (5.00%)	
occurrences (all)	0	1	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
24 June 2010	Amended to clarify the study design in response to questions from the Central IRB for severe adult participants and Food and Drug Administration.
15 September 2010	Amended to change the inclusion criteria of the peanut-specific immunoglobulin E threshold value in inclusion criterion from ≥5 kilounits per liter (kU/L) to >0.7 kU/L.
09 February 2011	Amended to clarify the conditions or circumstances in which the Viaskin™ patches must be removed earlier than the recommended durations of application (24 hours or 48 hours) in order to reinforce participant safety. Immediate removal of the Viaskin™ patch must occur in the case of an important local AE or in the case of any distant or systemic AE.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported