ANNEX I

SUMMARY OF PRODUCT CHARACTERISTICS

▼This medicinal product is subject to additional monitoring. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse reactions. See section 4.8 for how to report adverse reactions.

1. NAME OF THE MEDICINAL PRODUCT

VIMKUNYA suspension for injection in pre-filled syringe
Chikungunya vaccine (recombinant, adsorbed)

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

One dose (0.8 ml) contains 40 micrograms protein of chikungunya virus (CHIKV) virus-like particles[1,2] (VLP) adsorbed on aluminium hydroxide, hydrated.

[1]produced in human embryonic kidney cells by recombinant DNA technology.
[2]derived from CHIKV Senegal strain 37997 consisting of CHIKV capsid protein (C) and envelope proteins E1 and E2.

Aluminium hydroxide, hydrated (approximately 300 micrograms Al^{3+} per 0.8 ml dose).

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Suspension for injection.

Prior to shaking, the vaccine is a clear liquid with white precipitate.

pH: 6.6-8.2

Osmolality: 320-390 mOsmol/kg

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

VIMKUNYA is indicated for active immunisation for the prevention of disease caused by chikungunya virus (CHIKV) in individuals 12 years and older.

The use of this vaccine should be in accordance with official recommendations.

4.2 Posology and method of administration

Posology

A single dose of 0.8 ml should be administered.

Elderly
No dose adjustment is required in elderly individuals ≥ 65 years of age.

Paediatric population
The safety and efficacy of VIMKUNYA in children below 12 years of age have not been established. No data are available.

Method of administration

The vaccine should be administered by intramuscular (IM) injection in the deltoid muscle.

VIMKUNYA must not be injected intravenously, intradermally, or subcutaneously.

The pre-filled syringe should be vigorously shaken immediately before use to obtain a homogeneous suspension.

For instructions on handling and the disposal of waste material, see section 6.6.

4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.

4.4 Special warnings and precautions for use

Traceability

In order to improve the traceability of biological medicinal products, the name and the batch number of the administered product should be clearly recorded.

Hypersensitivity and anaphylaxis

Appropriate medical treatment used to manage immediate allergic reactions must be immediately available in the event an acute anaphylactic reaction occurs following administration of VIMKUNYA.

Immunocompromised individuals

The safety and efficacy of VIMKUNYA has not been assessed in patients with immunodeficiency and patients using systemic immunosuppressive therapies. It is not known whether individuals with impaired immune responsiveness, including individuals receiving immunosuppressive therapy, will elicit the same response as immunocompetent individuals to the vaccine regimen.

Anxiety-related reactions

As with all injectable vaccines, anxiety-related reactions, including vasovagal reactions (syncope), hyperventilation or stress-related reactions may occur in association with vaccination as a psychogenic response to the needle injection. It is important that precautions are in place to avoid injury from fainting.

Concurrent illness

Vaccination should be postponed in individuals suffering from acute severe febrile illness or acute infection. The presence of a minor infection and/or low-grade fever should not delay vaccination.

Thrombocytopenia and coagulation disorders

As with other intramuscular injections, the vaccine should be given with caution to individuals receiving anticoagulant therapy or those with thrombocytopenia or any coagulation disorder (such as haemophilia) because bleeding or bruising may occur following an intramuscular injection in these individuals.

Limitations of vaccine effectiveness

As with any vaccine, protection may not be elicited after vaccination in all persons. It is recommended to continue personal protection measures against mosquito bites after vaccination.

Excipients

Potassium
This vaccine contains less than 1 mmol potassium (39 mg) per dose, that is to say essentially 'potassium-free'.

Sodium
This vaccine contains less than 1 mmol sodium (23 mg) per dose, that is to say essentially 'sodium-free'.

4.5 Interaction with other medicinal products and other forms of interaction

No interaction studies with other medicinal products have been performed.

Concomitant administration of VIMKUNYA with other vaccines has not been studied.

4.6 Fertility, pregnancy and lactation

Pregnancy

In animal studies, no vaccine-related adverse effects on embryofetal development were observed in rats and rabbits; some postnatal effects of unknown clinical relevance were seen only in rabbits (see section 5.3).

There is limited amount of data from the use of VIMKUNYA in pregnant women. These data are not sufficient to conclude on the absence of potential effects of VIMKUNYA on pregnancy, embryo-foetal development, parturition and post-natal development.

Decisions to administer VIMKUNYA during pregnancy should take into consideration the individual's risk of exposure to wild-type CHIKV, gestational age, and risks to the foetus or neonate.

Breast-feeding

It is unknown if VIMKUNYA is excreted in human milk. A risk to the breastfed child cannot be excluded. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for VIMKUNYA and any potential adverse effects on the breastfed child from VIMKUNYA.

Fertility

No specific studies have been performed on fertility.

Animal studies do not indicate direct or indirect harmful effects with respect to female fertility (see section 5.3).

4.7 Effects on ability to drive and use machines

No studies on the effects on ability to drive or operate machines have been performed. However, some of the effects mentioned under section 4.8 “Undesirable effects” may temporarily affect the ability to drive or use machines.

4.8 Undesirable effects

Summary of the safety profile

The most common local adverse reaction at the injection site after vaccine administration was injection site pain (24.0%). The most common systemic adverse reactions observed after vaccination were fatigue (17.8%), headache (16.7%) and myalgia (16.5%) (Table 1).

Tabulated list of adverse reactions

The tabulated summary of the adverse reactions following administration of VIMKUNYA (Table 1) is based on an analysis of the pooled safety data gathered from three completed phase 2 studies and two completed phase 3 studies on 3 522 participants ≥ 12 years old who received VIMKUNYA. Of these, 3 141 individuals received a single 40 micrograms dose of VIMKUNYA. These participants were followed up for serious adverse events over the entire study period of 182 days.

Adverse reactions are presented as MedDRA preferred terms under the MedDRA System Organ Class. The adverse reactions reported are listed according to the following frequency:

- Very common ≥ 1/10
- Common ≥ 1/100 to < 1/10
- Uncommon ≥ 1/1 000 to < 1/100
- Rare ≥ 1/10 000 to < 1/1 000
- Very rare < 1/10 000

Table 1: Adverse reactions reported following administration of VIMKUNYA

MedDRA system organ class	Adverse reaction	Frequency
General disorders and administration site conditions	Injection site pain	Very common
	Fatigue	Very common
	Chills	Common
	Malaise	Common
	Injection site redness	Uncommon
	Injection site swelling	Uncommon
	Pyrexia	Uncommon
	Injection site bruising	Uncommon
Nervous system disorders	Headache	Very common
	Dizziness	Uncommon
	Paraesthesia	Rare
Musculoskeletal and connective tissue disorders	Myalgia	Very common
	Arthralgia	Common
	Pain in extremity	Rare
Gastrointestinal disorders	Nausea	Common

	Diarrhoea	Rare
	Lip swelling	Rare
Blood and lymphatic system disorders	Lymphadenopathy	Rare
Infections and infestations	Gastroenteritis	Rare
Respiratory, thoracic and mediastinal disorders	Nasal congestion	Uncommon
	Oropharyngeal pain	Rare
	Rhinorrhoea	Rare
Skin and subcutaneous tissue disorders	Rash	Uncommon

Paediatric population - adolescents

Of the 3 522 clinical study participants administered VIMKUNYA, 6.2% (N=217) were between 12 to < 18 years of age who received one dose of 40 micrograms of VIMKUNYA with a follow up of 182 days. The safety profile in adolescents is similar to the overall safety profile in adults.

Reporting of suspected adverse reactions
Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the national reporting system listed in Appendix V.

4.9 Overdose

No case of overdose has been reported in clinical trials. In the event of overdose, monitoring of vital functions and possible symptomatic treatment is recommended.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: other viral vaccines, ATC code: not yet assigned

Mechanism of action

VIMKUNYA is an adjuvanted VLP recombinant protein vaccine. VLPs cannot infect cells, reproduce, or cause disease. The exact mechanism of protection against CHIKV infection and/or disease has not been determined. It is thought that VIMKUNYA can induce protection from CHIKV infection by inducing neutralising antibodies against the CHIKV proteins C, E1, and E2 contained in VIMKUNYA resulting in neutralisation of live virus. An adjuvant is added to increase the magnitude of vaccine-mediated immune responses.

Immunogenicity

No efficacy data are available for VIMKUNYA. The clinical efficacy was inferred from a postvaccination CHIKV-specific neutralizing antibody titre threshold.

A threshold of anti-CHIKV serum neutralising antibody (SNA) titre ≥ 100, providing 80% neutralisation of CHIKV, as measured by an *in vitro* neutralizing assay, was selected as surrogate marker likely to predict protection from disease caused by CHIKV, referred to as seroresponse. This threshold was determined on the basis of a prospective sero-epidemiologic study in individuals with prior exposure to CHIKV and a non-human primate (NHP) passive transfer/challenge study using pooled sera from participants vaccinated with VIMKUNYA vaccine.

The immunogenicity of a single 40 micrograms dose of VIMKUNYA was evaluated in two pivotal studies conducted in the US, one phase 3 clinical study in adolescents and adults 12 to < 65 years of age (Study 1), and one phase 3 clinical study in adults ≥ 65 years of age (Study 2). Participants in both

phase 3 studies were followed up for 6 months after vaccination. Difference in anti-CHIKV SNA seroresponse rate (VIMKUNYA vaccine minus placebo) and anti-CHIKV SNA geometric mean titre (GMT) at 21 days post-vaccination (study visit day 22) were both co-primary endpoints. The seroresponse rate (SRR) was defined as the percentage of individuals who achieved an anti-CHIKV SNA NT80 titre ≥ 100. Immunocompromised individuals and individuals with prior receipt of immunosuppressive medications from 6 months prior to screening medications were excluded from study participation.

Study 1

This study was a phase 3 pivotal, randomised, multicentre, placebo-controlled, double-blind, parallel-group clinical study conducted in the US. A total of 3 258 healthy participants aged between 12 and < 65 years of age (mean age 39 years of age [range 12 to 64]) were randomised in a 2:2:2:1 ratio within each age stratum (12 to < 18 (N = 254; 7.8%), 18 to < 46 (N = 1 906; 58.5%), and 46 to < 65 years of age (N = 1 098; 33.7%)) to receive either one of three consecutively manufactured lots of VIMKUNYA as a single intramuscular 40 micrograms dose in a pre-filled syringe, or placebo. In the randomised population, 1 591 (48.8%) were males and 1 667 (51.2%) were females. There were 69 baseline seropositive participants (defined as Day 1 predose anti-CHIKV titre ≥ 15 (≥ assay lower limit of quantitation (LLOQ)) whose 63 participants of them in the VIMKUNYA group and 6 in the placebo group.

The immune response of 2 559 participants (immunogenicity evaluable population [IEP]) who received VIMKUNYA and 424 participants who received placebo was analysed. All participants from IEP were seronegative at baseline (pre-vaccination) for CHIKV neutralising antibodies. The comparison of the anti-CHIKV SNA response to VIMKUNYA and placebo at study visit days 8, 15, 22, and 183 as measured by clinically relevant difference in seroresponse rate and GMT is shown in Table 2 and Table 3.

Table 2: Anti-CHIKV SNA seroresponse rate (SRR) at visit days 8, 15, 22 and 183 for phase 3 Study 1 (12 to < 65 years of age) (immunogenicity evaluable population)

Study day	**SRR VIMKUNYA (N = 2 559) n/N (%)[a] [95% CI][b]**	**SRR placebo (N = 424) n/N (%)[a] [95% CI][b]**	**SRR difference [95% CI][c]**	**p-value[d]**
Day 8	1 169/2 510 (46.6%) [44.6%, 48.5%]	2/419 (0.5%) [0.1%, 1.7%]	46.1% [43.8%, 48.1%]	< 0.0001
Day 15	2 355/2 434 (96.8%) [96.0%, 97.4%]	3/395 (0.8%) [0.3%, 2.2%]	96.0% [94.3%, 96.8%]	< 0.0001
Day 22	2 503/2 559 (97.8%) [97.2%, 98.3%]	5/424 (1.2%) [0.5%, 2.7%]	96.6% [95.0%, 97.5%]	< 0.0001
Day 183	1 967/2 301 (85.5%) [84.0%, 86.9%]	6/401 (1.5%) [0.7%, 3.2%]	84.0% [81.7%, 85.6%]	< 0.0001

CI = confidence interval; SNA = serum neutralising antibody, SRR = seroresponse rate

[a] n is the number of participants with seroresponse ≥ titre 100, divided by N, the total number of participants in the group.

[b] 95% CIs of seroresponse rates are based on the Wilson method.

[c] Seroresponse rate difference is (VIMKUNYA minus placebo); 95% CIs are based on the Newcombe hybrid score method. Statistical superiority to placebo and lower bound of the 2-sided 95% CI on the difference in seroresponse rates between VIMKUNYA group and placebo group ≥ 70% (considered clinically significant).

[d] p-value is from a two-sided chi-square test of equality of seroresponse percentages between groups.

Table 3: Anti-CHIKV SNA geometric mean titre (GMT) at visit days 8, 15, 22 and 183 for phase 3 Study 1 (12 to < 65 years of age) (immunogenicity evaluable population)

Study day	VIMKUNYA (N = 2 559)	Placebo (N = 424)	p-value[c]
Day 8[a]			
n[b]	2 510	419	
SNA GMT [95% CI]	93.4 [87.2, 100.0]	7.4 [6.5, 8.4]	< 0.0001[d]
Day 15[a]			
n[b]	2 434	395	
SNA GMT [95% CI]	1 095.8 [1 029.3, 1 166.7]	7.6 [6.8, 8.6]	< 0.0001[d]
Day 22[a]			
n[b]	2 559	424	
SNA GMT [95% CI]	1 618.1 [1 522.1, 1 720.0]	7.9 [7.0, 8.8]	< 0.0001
Day 183[a]			
n[b]	2 301	401	
SNA GMT [95% CI]	337.7 [318.3, 358.4]	8.2 [7.3, 9.1]	< 0.0001[d]

GMT = geometric mean titre, IEP = immunogenicity evaluable population, N = total IEP, SNA = serum neutralising antibody.
For GMT results, values below lower limit of quantitation (LLOQ) of 15 were assigned the value LLOQ/2=7.5.
IEP: exposed participants who have no measurable anti-CHIKV SNA at Day 1, have an evaluable Day 22 serum sample result within analysis window (Day 19 through 27, inclusive), and have no exclusionary protocol deviations as defined prior to database lock or unblinding (as applicable).
[a] Day 8, 15, 22 and 183 corresponding to 7-, 14-, 21- and 182-days following vaccination with VIMKUNYA, respectively.
[b] n is the number of participants with a sample result available at the indicated visit.
[c] Geometric mean titre estimates, together with their 95% CIs, are derived from an ANOVA model that includes site and treatment group as fixed effects, assuming normality of the log titres. Ratio of GMT and 95% CIs are derived from the same model. p-value tests equivalence of group GMT on the log scale (ie, ratio of GMT equal to 1).
[d] Nominal p-value (formal adjustments for multiple comparisons were not applied).

Study 2
This study was a phase 3, randomised, placebo-controlled, double-blind, parallel-group study design with two treatment groups (VIMKUNYA or placebo). This was a multicentre study in the US with 413 healthy participants ≥ 65 years of age enrolled. Participants were randomised in a 1:1 ratio to receive either a single 40 micrograms dose of VIMKUNYA or placebo. The target population was adults ≥ 65 years of age (mean age 71 years of age [range 65 to 95]) stratified by age subgroups (65 to < 75 (N = 318; 77%) and ≥ 75 years of age (N = 95; 23%)). In the randomised population, 171 (41%) participants were males and 242 (59%) were females. Participants in this study were followed up for 6 months after immunisation. There were 15 baseline seropositive participants (defined as Day 1 predose anti-CHIKV titre ≥ 15 (≥ lower limit of quantitation [LLOQ]) whose 5 participants of them in the VIMKUNYA group and 10 in the placebo group. The immunogenicity evaluable population included 372 participants, of which 189 participants received VIMKUNYA and 183 participants received placebo. All these participants were negative at baseline (pre-vaccination) for CHIKV neutralising antibodies.

The comparison of the anti-CHIKV SNA response to VIMKUNYA and placebo at study visit days 15, 22, and 183 as measured by clinically relevant difference in seroresponse rate and GMT is shown in Table 4 and Table 5.

Table 4: Anti-CHIKV SNA seroresponse rate (SRR) at visit days 15, 22 and 183 for phase 3 Study 2 (≥ 65 years of age) (immunogenicity evaluable population)

Study day	SRR VIMKUNYA (N = 189) n/N (%)[a] [95% CI][b]	SRR placebo (N = 183) n/N (%)[a] [95% CI][b]	SRR difference [95% CI][c]	p-value[d]
Day 15	149/181 (82.3%) [76.1%, 87.2%]	5/176 (2.8%) [1.2, 6.5]	79.5% [72.3%, 84.6%]	< 0.0001
Day 22	165/189 (87.3%) [81.8%, 91.3%]	2/183 (1.1%) [0.3%, 3.9%]	86.2% [80.0%, 90.3%]	< 0.0001
Day 183	139/184 (75.5%) [68.9%, 81.2%]	2/173 (1.2%) [0.3%, 4.1%]	74.4% [67.1%, 80.1%]	< 0.0001

CI = confidence interval; SNA = serum neutralising antibody, SRR = seroresponse rate
[a] n is the number of participants with seroresponse ≥ titre 100, divided by N, the total number of participants in the group.
[b] 95% CIs of seroresponse rates are based on the Wilson method.
[c] Seroresponse rate difference is (VIMKUNYA minus placebo); 95% CIs are based on the Newcombe hybrid score method. Statistical superiority to placebo and lower bound of the two-sided 95% CI on the difference in seroresponse rates between VIMKUNYA group and placebo group ≥ 70% (considered clinically significant).
[d] p-value is from a two-sided chi-square test of equality of seroresponse percentages between groups.

Table 5: Anti-CHIKV SNA geometric mean Titre (GMT) at visit days 15, 22 and 183 for phase 3 Study 2 (≥ 65 years of age) (immunogenicity evaluable population)

Study day	VIMKUNYA (N = 189)	Placebo (N= 183)	p-value[c]
Day 15[a]			
n[b]	181	176	
SNA GMT [95% CI]	378.4 [301.0, 475.7]	9.0 [7.1, 11.3]	< 0.0001[d]
Day 22[a]			
n[b]	189	183	
SNA GMT [95% CI]	723.9 [584.1, 897.2]	8.1 [6.5, 10.0]	< 0.0001
Day 183[a]			
n[b]	184	173	
SNA GMT [95% CI]	233.0 [194.1, 279.8]	8.3 [6.9, 10.0]	< 0.0001[d]

GMT = geometric mean titre; IEP = immunogenicity evaluable population; N = total IEP, SNA = serum neutralising antibody.
For GMT results, values below lower limit of quantitation (LLOQ) of 15 were assigned the value LLOQ/2=7.5.
IEP: exposed participants who have no measurable anti-CHIKV SNA at Day 1, have an evaluable Day 22 serum sample result within analysis window (Day 19 through 27, inclusive), and have no exclusionary protocol deviations as defined prior to database lock or unblinding (as applicable).
[a] Day 15, 22 and 183 corresponding to 14-, 21- and 182-days following vaccination with VIMKUNYA, respectively.
[b] n is the number of participants with a sample result available at the indicated visit.
[c] Geometric mean titre estimates, together with their 95% CIs, are derived from an ANOVA model that includes site and treatment group as fixed effects, assuming normality of the log titres. Ratio of GMT and 95% CIs are derived from the same model. p-value tests equivalence of group GMT on the log scale (ie, ratio of GMT equal to 1).
[d] Nominal p-value (formal adjustments for multiple comparisons were not applied).

In the phase 3 studies (Study 1, Study 2), among the different age groups, the seroresponse rate (anti-CHIKV SNA NT80 titre ≥ 100) and GMT measured in the VIMKUNYA group at Day 22 (21 days postvaccination) were as follows: 12 to < 18: 97.0%, GMT 2 502; 18 to < 46: 98.3%, GMT 1 878; 46 to < 65: 97.2%, GMT 1 175; ≥ 65 to < 75: 87.9%, GMT 726; and ≥ 75 years of age 85.0%, GMT 716.

Paediatric population

The European Medicines Agency has deferred the obligation to submit the results of studies with VIMKUNYA in one or more subsets of the paediatric population for active immunisation for the prevention of disease caused by chikungunya virus (CHIKV) (see section 4.2 for information on paediatric use).

5.2 Pharmacokinetic properties

Not applicable.

5.3 Preclinical safety data

Nonclinical data reveal no special hazard for humans based on conventional studies of repeated dose toxicity, and local tolerance.

Reproductive toxicity

Developmental and reproductive toxicity studies were performed in female rabbits and rats with administration of multiple doses of VIMKUNYA prior to mating and during gestation. No vaccine-related adverse effects on female fertility or embryofetal development were observed in any species. A decrease in the postnatal survival index was observed in rabbits but not in rats; the human relevance of this finding is not known.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Sucrose
Dipotassium phosphate
Potassium dihydrogen phosphate
Sodium citrate
Water for injections

For the adsorbent see section 2.

6.2 Incompatibilities

In the absence of compatibility studies, the vaccine must not be mixed with other medicinal products.

6.3 Shelf life

3 years

6.4 Special precautions for storage

Store in a refrigerator (2 °C to 8 °C).

Do not freeze.

Keep the syringe in the outer carton in order to protect from light.

Stability data indicate that the vaccine is stable for 4 hours when stored at temperatures from 8 °C to 25 °C and for at least 24 hours when stored at 0 °C to 2 °C. At the end of this period VIMKUNYA should be used immediately or discarded. These data are intended to guide healthcare professionals in case of temporary temperature excursion only.

6.5 Nature and contents of container

Nature of container

0.8 ml suspension in a single-dose pre-filled syringe consisting of a glass barrel (Type I glass), Luer lock adapter (polycarbonate), rigid cap (transparent polypropylene), rubber closure (isoprene-bromobutyl blend), rubber plunger stopper (chlorobutyl rubber), plunger rod (white polypropylene), and finger flange (white polypropylene).

The pre-filled syringe is protected by a tray placed in a carton box.

Presentation

Pack size of 1 single-dose pre-filled syringe (0.8 ml) without needle.

6.6 Special precautions for disposal and other handling

Keep this vaccine out of sight and reach of children.

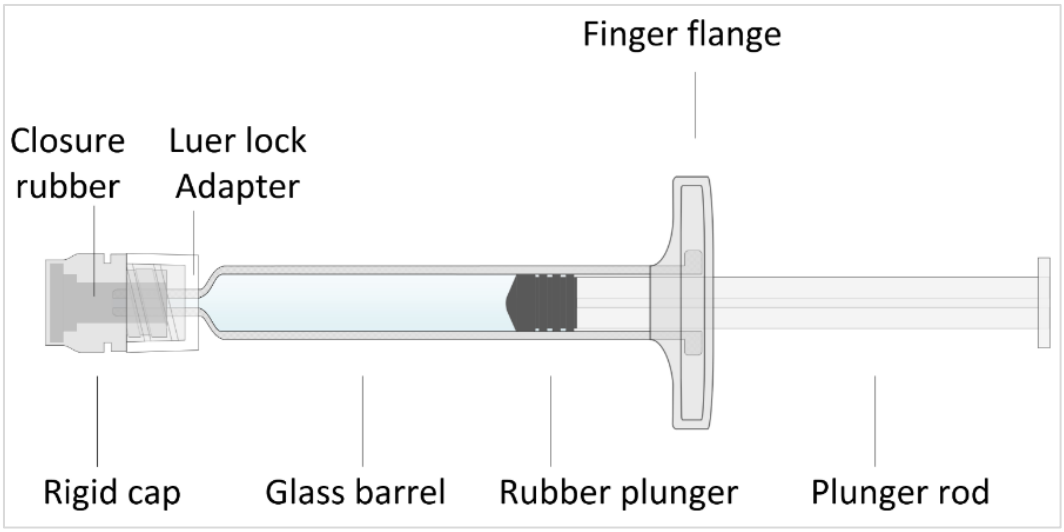
Handling instructions and administration

The vaccine should be handled by a healthcare professional using aseptic technique to ensure the sterility of the dose.

Do not mix VIMKUNYA with any other vaccine in the same syringe or vial.

Preparation for use

- Remove vaccine carton from refrigerator (2 °C to 8 °C).



Inspect the pre-filled syringe

- Remove the pre-filled syringe tray from carton.
- Take the pre-filled syringe out of the tray by holding the syringe barrel.
- Inspect the pre-filled syringe for any abnormal appearance or leakage. If any defects are found, do not use the pre-filled syringe.
- VIMKUNKA is a clear liquid with white precipitate prior to agitation.
- Shake the pre-filled syringe vigorously immediately before use to obtain a homogeneous suspension. After shaking, the suspension should be a white, cloudy liquid with no visible foreign particulate. Inspect the suspension for discoloration and particulate. Do not administer the vaccine if any of these are present.

Administer the vaccine

- Hold the pre-filled syringe barrel with the nozzle facing up and gently unscrew the Luer lock cap of the pre-filled syringe. Do not attempt to snap or pull the tip off as this may damage the syringe.
- This package does not contain a needle. Use a sterile needle of the appropriate size to ensure an intramuscular injection depending on the patient's size and weight.
- Attach the sterile needle to the pre-filled syringe and ensure the needle fits securely on the syringe.
- VIMKUNYA appears as a homogeneous white cloudy suspension with no visible foreign particulate after shaking. If the vaccine is not a homogenous suspension, shake the syringe vigorously to resuspend prior to administration.
- Administer the entire dose as an IM injection in the deltoid muscle of the upper arm, by smoothly depressing the plunger rod and maintaining pressure on the rod until the full contents of the syringe are expelled to complete the injection.
- VIMKUNYA is for IM administration only. Do not administer intravenously, intradermally, or subcutaneously.
- The injection must be administered within 4 hours after removal of the pre-filled syringe from the refrigerator (2 °C to 8 °C).
- In-use stability data indicate that the vaccine is stable when stored for 4 hours at temperatures 8 °C to 25 °C and for at least 24 hours when stored at 0 °C to 2 °C. From a microbiological point of view, the product should be used immediately. If not used immediately, in-use storage times and conditions prior to use are the responsibility of the user.

Discard

- Discard this vaccine if not used within 4 hours after removal of the pre-filled syringe from 2 °C to 8 °C storage.
- Discard syringe after use.

Disposal

- Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

Bavarian Nordic A/S
Philip Heymans Alle 3
DK-2900 Hellerup
Denmark

8. MARKETING AUTHORISATION NUMBER

EU/1/25/1916/001

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation:

10. DATE OF REVISION OF THE TEXT

Detailed information on this medicinal product is available on the website of the European Medicines Agency https://www.ema.europa.eu.

ANNEX II

A. <MANUFACTURER(S) OF THE BIOLOGICAL ACTIVE SUBSTANCE(S) AND> MANUFACTURER(S) RESPONSIBLE FOR BATCH RELEASE

B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE

C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION

D. CONDITIONS OR RESTRICTIONS WITH REGARD TO THE SAFE AND EFFECTIVE USE OF THE MEDICINAL PRODUCT

A. MANUFACTURER OF THE BIOLOGICAL ACTIVE SUBSTANCE AND MANUFACTURER RESPONSIBLE FOR BATCH RELEASE

Name and address of the manufacturer of the biological active substance

Bavarian Nordic Berna GmbH
Oberriedstrasse 68
3174 Thörishaus
Switzerland

Name and address of the manufacturer responsible for batch release

Bavarian Nordic A/S
Hejreskovveij 10 A
3490 Kvistgaard
Denmark

B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE

Medicinal product subject to medical prescription.

- **Official batch release**

In accordance with Article 114 of Directive 2001/83/EC, the official batch release will be undertaken by a state laboratory or a laboratory designated for that purpose.

C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION

- **Periodic safety update reports (PSURs)**

The requirements for submission of PSURs for this medicinal product are set out in the list of Union reference dates (EURD list) provided for under Article 107c(7) of Directive 2001/83/EC and any subsequent updates published on the European medicines web-portal.

The marketing authorisation holder (MAH) shall submit the first PSUR for this product within 6 months following authorisation.

D. CONDITIONS OR RESTRICTIONS WITH REGARD TO THE SAFE AND EFFECTIVE USE OF THE MEDICINAL PRODUCT

- **Risk management plan (RMP)**

The marketing authorisation holder (MAH) shall perform the required pharmacovigilance activities and interventions detailed in the agreed RMP presented in Module 1.8.2 of the marketing authorisation and any agreed subsequent updates of the RMP.

An updated RMP should be submitted:

- At the request of the European Medicines Agency;
- Whenever the risk management system is modified, especially as the result of new information being received that may lead to a significant change to the benefit/risk profile or as the result of an important (pharmacovigilance or risk minimisation) milestone being reached.

- **Obligation to conduct post-authorisation measures**

The MAH shall complete, within the stated timeframe, the below measures:

Description	**Due date**
Post authorisation efficacy study (PAES): In order to confirm the efficacy of VIMKUNYA in individuals 12 years and older, the MAH should conduct and submit the results of a randomized, placebo-controlled, double-blind, event-driven study to analyse efficacy, safety, and immunogenicity of VIMKUNYA in the prevention of chikungunya disease in healthy adults and adolescents in CHIKV-endemic areas, according to an agreed protocol.	Final report due date: 31st August 2030

ANNEX III

LABELLING AND PACKAGE LEAFLET

A. LABELLING

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

Outer carton for single-dose pre-filled syringe without needle, pack of 1

1. NAME OF THE MEDICINAL PRODUCT

VIMKUNYA suspension for injection in pre-filled syringe
Chikungunya vaccine (recombinant, adsorbed)

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each dose (0.8 ml) contains 40 micrograms protein of chikungunya virus virus-like particles adsorbed on aluminium hydroxide, hydrated (approximately 300 micrograms Al^{3+}).

3. LIST OF EXCIPIENTS

Excipients: sucrose, sodium citrate, dipotassium phosphate, potassium dihydrogen phosphate, and water for injections.

See leaflet for further information.

4. PHARMACEUTICAL FORM AND CONTENTS

Suspension for injection
1 single-dose pre-filled syringe (0.8 ml) without needle

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Intramuscular use.
Shake vigorously immediately before administration.
Read the package leaflet before use.
QR code to be included. For more information, scan here or visit <BN website link>

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

Store in a refrigerator (2 °C to 8 °C).
Do not freeze.
Keep the syringe in the outer carton in order to protect from light.

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

Dispose of in accordance with local requirement.

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

Bavarian Nordic A/S
Philip Heymans Alle 3
2900 Hellerup
Denmark

12. MARKETING AUTHORISATION NUMBER(S)

EU/1/25/1916/001

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY

15. INSTRUCTIONS ON USE

16. INFORMATION IN BRAILLE

Justification for not including Braille accepted.

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER – HUMAN READABLE DATA

PC
SN
NN

MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS

Syringe

1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION

VIMKUNYA suspension for injection
Chikungunya vaccine (recombinant, adsorbed)
IM

2. METHOD OF ADMINISTRATION

Intramuscular use

3. EXPIRY DATE

EXP

4. BATCH NUMBER<, DONATION AND PRODUCT CODES>

Lot

5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT

1 dose (0.8 ml)

6. OTHER

B. PACKAGE LEAFLET

Package leaflet: Information for the user

VIMKUNYA suspension for injection in pre-filled syringe
Chikungunya vaccine (recombinant, adsorbed)

▼This medicine is subject to additional monitoring. This will allow quick identification of new safety information. You can help by reporting any side effects you may get. See the end of section 4 for how to report side effects.

Read all of this leaflet carefully before you receive this medicine because it contains important information for you.
- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor, pharmacist or nurse.
- If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What VIMKUNYA is and what it is used for

VIMKUNYA is a vaccine used to prevent disease caused by the chikungunya virus in people 12 years of age and older.

VIMKUNYA is a vaccine that contains part of the ‘outer coating’ of the chikungunya virus. This ‘outer coating’ is not infectious and cannot cause chikungunya disease but teaches the immune system (the body’s natural defences) how to protect itself against the virus that causes chikungunya disease.

Chikungunya disease is caused by the chikungunya virus, which is transmitted through the bite of infected mosquitoes. The disease is found in countries across Asia, Africa and the subtropical regions of the Americas. Most people infected with the virus develop fever, rash, and severe pain in multiple joints that typically resolve between one to two weeks, but symptoms may last for months or years.

2. What you need to know before you use VIMKUNYA

You should not receive VIMKUNYA if you are allergic to the active substance or any of the other ingredients of this vaccine (listed in section 6).

Warnings and precautions
Talk to your doctor, pharmacist or nurse before you are given VIMKUNYA if:
- you have ever had a severe allergic reaction (hypersensitivity) or breathing problems after any other vaccine administration.
- you have ever fainted following any injection.
- you have a severe illness or infection with a high temperature (over 38 °C). You can still have your vaccination if you have a mild fever or upper airway infection like a cold.
- you have a weakened immune system (immunodeficiency), or you are taking medicines that weaken the immune system (such as high-dose corticosteroids, immunosuppressants, or cancer medicines).

- you have a problem with bleeding or bruising (such as thrombocytopenia or haemophilia) or if you are taking an anticoagulant (a medicine to prevent blood clots).

Children
VIMKUNYA is not for use in children under 12 years of age. There is no information available on the use of VIMKUNYA in this age group.

Other medicines and VIMKUNYA
Tell your doctor if you are taking, have recently taken or might take any other medicines or vaccines.

Pregnancy, breast-feeding and fertility
If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor for advice before you receive this vaccine.

Driving and using machines
Some of the possible side effects of VIMKUNYA listed in section 4 of this leaflet may temporarily reduce your ability to drive or use machines. Wait until any effects of the vaccine have worn off before you drive or use machines.

VIMKUNYA contains sodium and potassium
This vaccine contains less than 1 mmol sodium (23 mg) per dose, that is to say essentially 'sodium-free'.
This vaccine contains less than 1 mmol (39 mg) potassium per dose, that is to say essentially 'potassium-free'.

3. How VIMKUNYA is given

VIMKUNYA is given as a single injection into the large muscle of the upper arm. It is best to get the injection in the non-dominant arm.

If you have any further questions on the use of this vaccine, ask your doctor, pharmacist or nurse.

4. Possible side effects

Like all medicines, this vaccine can cause side effects, although not everybody gets them.

Seek urgent medical attention if you have symptoms of a severe allergic reaction after receiving the vaccine. Symptoms may include:
- feeling faint or light-headed
- changes in your heartbeat
- shortness of breath
- wheezing
- swelling of your lips, face, or throat
- itchy swelling under the skin (hives) or rash
- feeling sick (nausea) or vomiting
- stomach pain.

The following side effects may also occur after receiving this vaccine:

Very common (may affect more than 1 in 10 people)
- pain at injection site
- tiredness (fatigue)
- headache
- muscle pain (myalgia).

Common (may affect up to 1 in 10 people)
- chills (shivering)
- joint pain (arthralgia)
- general feeling of discomfort (malaise)
- feeling sick (nausea).

Uncommon: (may affect up to 1 in 100 people)
- redness, bruising or swelling where the injection is given
- fever
- dizziness
- nasal congestion
- skin rash

Rare (may affect up to 1 in 1 000 people):
- pins and needles or tingling sensations (paraesthesia)
- pain in extremities
- diarrhoea
- lip swelling
- swollen lymph nodes (lymphadenopathy)
- diarrhoea and vomiting (gastroenteritis)
- sore throat (oropharyngeal pain)
- runny nose (rhinorrhoea)

Reporting of side effects
If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via the national reporting system listed in Appendix V. By reporting side effects, you can help provide more information on the safety of this medicine.

5. How to store VIMKUNYA

Keep this vaccine out of the sight and reach of children.

Your doctor, pharmacist or nurse is responsible for storing this medicine and disposing of any unused product correctly. The following information is intended for healthcare professionals.

Do not use this vaccine after the expiry date which is stated on the label after EXP.

Store in a refrigerator (2 °C to 8 °C). Do not freeze. Keep the syringe in the outer carton in order to protect from light.

In-use stability data indicate that the vaccine is stable for 4 hours when stored at temperatures from 8 °C to 25 °C and for at least 24 hours when stored at 0 °C to 2 °C. After this time, the vaccine must be discarded.

Do not throw away any vaccines via wastewater or household waste. Your doctor, pharmacist or nurse will dispose of this vaccine. These measures will help protect the environment.

6. Contents of the pack and other information

What VIMKUNYA contains

Each 0.8 ml dose contains 40 micrograms protein of chikungunya virus (CHIKV) virus-like particles[1,2] adsorbed on aluminium hydroxide, hydrated.

[1]produced in human embryonic kidney cells by recombinant DNA technology
[2]derived from CHIKV Senegal strain 37997 consisting of CHIKV capsid protein (C) and envelope proteins E1 and E2.

Aluminium hydroxide, hydrated containing per 0.8 ml dose: approximately 300 micrograms Al^{3+}.

Aluminium hydroxide, hydrated is included in the vaccine as an adsorbent. Adsorbents are substances included in certain vaccines to accelerate, improve and/or prolong the protective effects of the vaccine.

The other ingredients (excipients) are: sucrose, dipotassium phosphate, potassium dihydrogen phosphate, sodium citrate, and water for injections. See Section 2 “the vaccine contains sodium and potassium”.

What VIMKUNYA looks like and contents of the pack

1 dose of VIMKUNYA suspension for injection contains 0.8 ml.

Pack size: 1 single-dose pre-filled syringe.

Prior to shaking, the vaccine is a clear liquid with white precipitate.

Marketing Authorisation Holder
Bavarian Nordic A/S
Philip Heymans Alle 3
DK-2900 Hellerup
Denmark

Manufacturer
Bavarian Nordic A/S
Hejreskovveij 10 A
DK-3490 Kvistgaard
Denmark

This leaflet was last revised in.

Other sources of information

Detailed information on this medicine is available on the European Medicines Agency web site: https://www.ema.europa.eu

You may also scan the QR code with a mobile device to get the package leaflet in different languages or visit the URL

QR code to be included

The following information is intended for healthcare professionals only:

Administer VIMKUNYA intramuscularly only, preferably in the deltoid muscle. Do not administer intravenously, intradermally, or subcutaneously.

Posology

A single intramuscular dose of 0.8 ml should be administered.

Handling instructions and administration

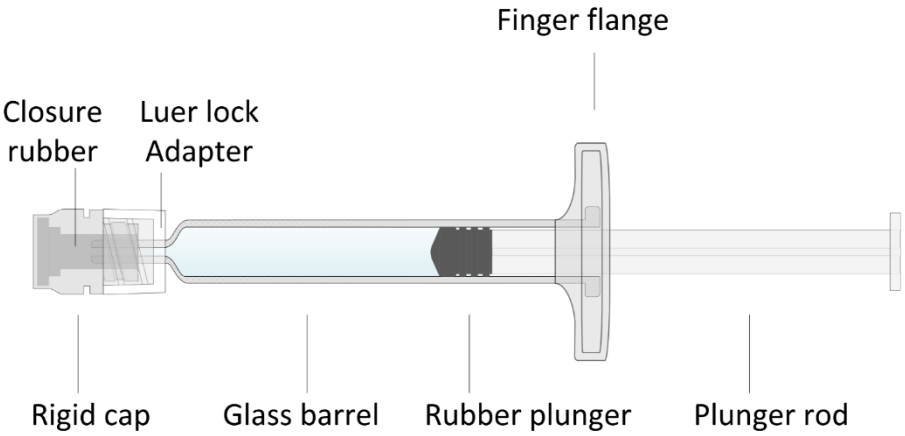
Do not use this vaccine after the expiry date, which is stated on the label after EXP. The expiry date refers to the last day of that month.

The vaccine should be handled by a healthcare professional using aseptic technique to ensure the sterility of each dose.

Do not mix VIMKUNYA with any other vaccine in the same syringe or vial.

Storage conditions:
- Store in a refrigerator (2 °C to 8 °C).
- Do not freeze.
- Keep the syringe in the outer carton in order to protect from light.

Preparation for use:
- Remove vaccine carton from refrigerator (2 °C to 8 °C).



Inspect the pre-filled syringe
- Remove the pre-filled syringe tray from carton.
- Take the pre-filled syringe out of the tray by holding the syringe barrel.
- Inspect the pre-filled syringe for any abnormal appearance or leakage. If any defects are found, do not use the pre-filled syringe.
- VIMKUNKA is a clear liquid with white precipitate prior to agitation.
- Shake the pre-filled syringe vigorously immediately before use to obtain a homogeneous suspension. After shaking, the suspension should be a white, cloudy liquid with no visible foreign particulate. Inspect the suspension for discoloration and particulate. Do not administer the vaccine if any of these are present.

Administer the vaccine

- Hold the pre-filled syringe barrel with the nozzle facing up, position and gently unscrew the Luer lock cap of the pre-filled syringe. Do not attempt to snap or pull the tip off as this may damage the syringe.
- This package does not contain a needle. Use a sterile needle of the appropriate size to ensure an intramuscular injection depending on the patient's size and weight.
- Attach the sterile needle to the pre-filled syringe and ensure the needle fits securely on the syringe.
- VIMKUNYA appears as a homogeneous white cloudy suspension with no visible foreign particulate after shaking. If the vaccine is not a homogenous suspension, shake the syringe vigorously to resuspend prior to administration.
- Administer the entire dose as an intramuscular (IM) injection in the deltoid muscle of the upper arm, by smoothly depressing the plunger rod and maintaining pressure on the rod until the full contents of the syringe are expelled to complete the injection.
- VIMKUNYA is for intramuscular (IM) administration only. Do not administer intravenously, intradermally, or subcutaneously.
- The injection must be administered within 4 hours after removal of the pre-filled syringe from the refrigerator (2 °C to 8 °C).
- In-use stability data indicate that the vaccine is stable for 4 hours when stored at temperatures 8 °C to 25 °C and for at least 24 hours when stored at 0 °C to 2 °C. After this time, the vaccine must be discarded.

Discard

- Discard syringe after use.
- Discard this vaccine if not used within 4 hours after removal of the pre-filled syringe from 2 °C to 8 °C storage.

Disposal

- Any unused medicinal product or waste material should be disposed of in accordance with local requirements.