

MONTHLY SCIENTIFIC REVIEW ON CHIKUNGUNYA VIRUS

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All informations comes from a valid and credible source.

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Situation at a glance

- On 27 January 2026, the first locally acquired case of chikungunya since 2014 was detected in Kourou, French Guiana. Since the identification of this initial confirmed case in late January, 1,604 biologically confirmed chikungunya cases have been reported in French Guiana according to Santé Publique France. Viral circulation is expanding and intensifying across the territory.
- Between 2010 and 2024, no cases had been detected on Réunion Island. In 2025, Réunion experienced a major outbreak, with nearly 54,550 laboratory-confirmed locally acquired chikungunya cases and 43 deaths. Health authorities declared the end of the outbreak on 24 June 2025. In parallel, Mayotte also experienced active viral circulation with more than 1,200 cases.
- Mainland France also experienced active CHIKV transmission, with a total of 787 locally acquired cases and 1,053 imported cases reported as of 17 October, across 15 departments of metropolitan France.

Scientific articles

This section presents relevant articles published on peer-reviewed scientific journals or pre-print platforms.

2026-07-27

Mapping Human Clinical Evidence for Chikungunya Vaccines: A Scoping Review of Immunogenicity, Durability, and Safety.

Journal: Vaccines (Basel)

Authors: Shan Wu, Jiachen Wu, Yiu-Wing Kam

A scoping review mapped 77 human studies on chikungunya vaccines, identifying key candidates (VLA1553/IXCHIQ, PXVX0317/Vimkunya) with late-stage/post-authorization data, while viral-vector and mRNA vaccines remain in early-phase trials. Evidence is limited in children, pr

[See details](#)

2026-07-03

Dengue and chikungunya virus transmission in Kinshasa, Democratic Republic of the Congo.

Journal: medRxiv

Authors: Rachel Sendor, Jessie Edwards, Kristin Banek, Melchior Mwandagilirwa Kashamuka, Justin Lessler, Daniel O Espinoza, Izabella N Castillo, Fabien Vulu, Nono Mvuama, Joseph A Bala, Marthe Nkalani, Georges Kihuma, Joseph Atibu, Tommy Nseka, Kyaw L Thwai, Lakshmanane Premkumar, Rhoel R Dinglasan, Michael Emch, Jonathan J Juliano, Matthew H Collins, Antoinette Tshetu, Jonathan B Parr

DENV and CHIKV seroprevalence in Kinshasa, DRC, was 38.1% and 24.2%, respectively, increasing with age and varying by location, with highest DENV rates in peri-urban Kimpoko. Co-infection occurred in 12.8%. Bayesian modeling revealed time-varying force of infection and sp

[See details](#)

2026-07-24

Global molecular and serological evidence of dengue and chikungunya infection: a systematic review and meta-analysis of 158,608 tested participants.

Journal: Rev Environ Health

Authors: Mohammed Alissa, Abdullah Alghamdi, Suad A Alghamdi, Ghadah S Abusalim, Abdulkarim S Binshaya, Ghfren S Aloraini, Tawfiq N Juraybi, Meshari A Alsuwat

Meta-analysis of 196 studies (158,608 participants) shows pooled serological positivity of 14.0% for CHIKV and 13.8% for DENV, with high heterogeneity ($I^2 > 97\%$). Molecular detection rates were lower (9.8% CHIKV, 13.1% DENV), and dual infection was 52.9% in co-tested cases

[See details](#)

2026-07-23

Trifluoperazine exhibits broad-spectrum antiviral activity against arboviruses.

Journal: Antimicrob Agents Chemother

Authors: Laxmi Mishra, Manjula Kalia

Trifluoperazine (TFP), an FDA-approved antipsychotic, exhibits broad-spectrum antiviral activity against JEV, DENV, and CHIKV in vitro and in vivo, reducing disease severity. Its mechanism involves eIF2 α phosphorylation and adaptive ER stress, reversible by 4PBA, confirmi

[See details](#)

2026-07-24

Decoupling musculoskeletal damage from antiviral control: the NLRP3 inflammasome in arthritogenic alphavirus infection.

Journal: Front Cell Infect Microbiol

Authors: Fahu Yuan, Jiangyuan Chen

Arthritogenic alphaviruses (CHIKV, RRV, MAYV) drive persistent musculoskeletal disease post-viremia via NLRP3 inflammasome activation. Viral sensing primes NLRP3 via NF- κ B, while K⁺ efflux, mitochondrial stress, and ROS trigger inflammasome assembly in joints, promoting I

[See details](#)

2026-07-21

Early transcriptional signature in chikungunya predicts chronic arthralgia and reveals deficient antiviral response.

Journal: J Infect Dis

Authors: Thiago Cerqueira-Silva, Laise de Moraes, Blenda de Jesus Pereira, Jessica Silva, Cibele Orge, Kevan Akrami, Ligia Souza, Laila Horta, Moacyr Rego, Amanda Albuquerque, Joyce Karoline da Silva, Paula M Cassais, Luciano Pamplona Calvacanti, Cristina Ribeiro Cardoso, Pablo Ivan P Ramos, Luciane Amorim Santos, Manoel Barral-Netto, Aldina Barral, Ricardo Khouri, Viviane S Boaventura

Early transcriptional profiling in chikungunya patients reveals IKZF2 upregulation in chronic cases and ACKR3 in recovered individuals, with higher viral loads and impaired IFN- α/γ responses in chronic patients. Sex-specific immune differences—upregulated IFN/TNF pathways

[See details](#)

2026-07-21

Ewing sarcoma breakpoint region 1 (EWSR1) protein binds to nonstructural protein 2 and non-coding regions of chikungunya virus genome to inhibit virus replication.

Journal: J Virol

Authors: Shivani Balyan, Anshula Sharma, Devendra Sharma, Deepti Jain, Sudhanshu Vrat

EWSR1 binds CHIKV 3'-NCR RNA and nsP2, inhibiting viral RNA synthesis and helicase activity, thereby restricting replication. Its downregulation during infection enhances viral titers, while overexpression suppresses replication. EWSR1 acts as a host restriction factor fo

[See details](#)

2026-07-03

Early Immune Hypoactivation and Persistent Innate Reprogramming Characterize Chronic Chikungunya Disease.

Journal: bioRxiv

Authors: Lien De Caluwé, Candice Bohaud, Borita Heng, Sokchea Lay, Sopheak Sorn, Sreymom Ken, Alvino Maestri, Veasna Duong, Sowath Ly, Giorgio Gonnella, Tineke Cantaert

Chronic chikungunya is marked by early innate immune hypoactivation during acute infection—reduced monocyte/dendritic cells, lower IFN- α , IL-6, IL-8, impaired antigen presentation, and diminished adaptive immunity—with persistent innate remodeling at 6 months, including i

[See details](#)

2026-07-27

Dual-Mode Field-Deployable Platform Based on Self-Assembled Magnetic Probes for Simultaneous Monitoring of Chikungunya Virus and Host Immune Status.

Journal: ACS Appl Mater Interfaces

Authors: Junyan Ai, Jiaxuan Li, Qian Wang, Tao Zhang, Meirou Lu, Jiahuan Zhang, Chongwen Wang, Bing Gu

A dual-mode lateral flow immunoassay using self-assembled MAu₂QD₃ probes enables simultaneous, ultrasensitive detection of chikungunya virus antigen and IL-6 in clinical samples, with visual LODs of 50 pg/mL and instrument-assisted LODs of 0.28–0.16 pg/mL. An AI model int

[See details](#)

2026-07-26

3D-printed multi-electrode platform for electrochemical immunosensing of Chikungunya virus in serum samples.

Journal: Talanta

Authors: Rubens Beckert-Filho, Gustavo Martins, Thomas A C Martins, Marcia G P Valenga, Luiz H Marcolino-Junior, Márcio F Bergamini

A 3D-printed multi-electrode platform with graphene oxide-modified, antibody-functionalized electrodes enables sensitive, selective electrochemical detection of Chikungunya virus antigen in serum. EIS and SWV offer a broad dynamic range (40 pg/mL to 1.3 ng/mL), distinguis

[See details](#)

Relevant news

This section presents official reports from health agencies, manufacturers and press releases with reliable sources.

2026-06-05

Lingering symptoms follow chikungunya, dengue, Zika, malaria infections

Source: CIDRAP

Chikungunya, dengue, Zika, and malaria patients report persistent symptoms up to 6 months post-infection, with chikungunya having the longest duration (86% symptomatic at 1 month, full recovery by 18 months). Dengue and Zika symptoms declined by 12 months; malaria-related

[See details](#)

2026-07-22

Asian tiger mosquito - Launch of enhanced surveillance: let's act together!

Source: ARS

Two autochthonous dengue cases in Tarn and Hérault, Occitania, in summer 2026 underscore local transmission risk via *Aedes albopictus*. No ongoing circulation of dengue, chikungunya, or Zika in metropolitan France; all cases remain imported, primarily from the Indian Ocean

[See details](#)

2026-07-01

Enjoy the summer by protecting your health!

Source: ARS

Adopt heatwave precautions per Météo-France vigilance levels; protect skin from UV with sun safety; swim safely by checking water quality and avoiding drowning/infections; prevent tiger mosquito-borne diseases (dengue, chikungunya, Zika) via environmental control and pers

[See details](#)

2026-08-21

Chikungunya et dengue en Guyane. Bulletin du 21 août 2026.

Source: Santé Publique France

Dengue activity remains low across the territory. Chikungunya circulation is active, with 1,604 confirmed cases since late January. The Western Littoral is in epidemic phase; Savanes shows sharply rising emergency visits; Cayenne Island has multiple active clusters; Maroni reports sporadic transmission; Interior, Interior East, and Oyapock remain in surveillance with no new cases in week 33.

[See details](#)

Clinical Studies

This section presents relevant clinical trials.

2026-01-26

A Phase I Study of PepGNP-ChikV in Healthy Volunteers

Status: Not yet recruiting

Sponsor(s): Gyliden Pharma Ltd

Phase I study evaluates safety and reactogenicity of PepGNP-ChikV, a novel Chikungunya peptide vaccine, in 40 healthy adults (18–60 years) across four dose cohorts. Participants receive two doses 42 days apart, with 1-hour post-vaccination observation. Reactogenicity (sol

[See details](#)

2026-03-09

An Efficacy, Safety, and Immunogenicity Study of CHIKV VLP Vaccine for the Prevention of Chikungunya Disease in Adolescents and Adults

Status: Recruiting

Sponsor(s): Bavarian Nordic (Group), Walter Reed Army Institute of Research (WRAIR), Congressionally Directed Medical Research Programs, United States Department of Defense, Pharmaceutical Product Development, (PPD) LLC, Armed Forces Research Institute of Medical Services, Q-square Business Intelligence, Inc.

This field study (EBSI-CV-317-007) evaluates the efficacy, immunogenicity, and safety of a CHIKV VLP vaccine in adolescents and adults. Utilizing infectious disease models and advanced analytics, the study optimizes site selection, timing, and design to align with local chikungunya epidemiology, addressing challenges in efficacy assessment for this vaccine.

[See details](#)

2025-04-15

Chikungunya Virus Detection in Semen

Status: Not yet recruiting

Sponsor(s): Hôpital Rangueil, Agence de La Biomédecine

This prospective pilot study investigates Chikungunya virus presence and infectivity in semen of 15 acutely infected men, sampling at multiple time points post-symptom onset. Blood, urine, and semen (seminal plasma, native sperm, and prepared fractions) are tested for vir

[See details](#)

2026-06-24

Smart Analysis and Decision-Making for Emerging Infectious Diseases

Status: Enrolling by invitation

Sponsor(s): Peking University, National Health Commission's Pharmaceutical and Health Technology Development Research Center

This study develops an AI-driven smart system for emerging infectious diseases, integrating a global burden database, risk assessment models, and a multi-agent decision-support toolkit. Evaluated via a cluster RCT in 36 CDC clusters across five Chinese provinces, it aims

[See details](#)

2025-11-19

Prospective Safety Cohort Study After VLA1553 Vaccination in Municipalities Selected for Participation in the VLA1553 Pilot Vaccination Strategy in Brazil

Status: Active not recruiting

Sponsor(s): Valneva Austria GmbH, Butantan Foundation, Coalition for Epidemic Preparedness Innovations

This is an observational study with primary data collection, which will combine a prospective safety cohort study and an SCRI study.

[See details](#)

2025-08-01

Prospective Clinical Registry for Evaluation of Exanthematous Infections and Coinfections

Status: Not yet recruiting

Sponsor(s): Hospital Israelita Albert Einstein

This prospective registry in Brazil aims to track dengue, Chikungunya, measles, and rubella to clarify epidemiological patterns, identify clinical predictors, and uncover healthcare barriers to accurate diagnosis and reporting amid overlapping symptoms, declining vaccination, and arbovirus epidemics.

[See details](#)

2024-10-17

The Interest of Systematic Screening for Dengue, Chikungunya, and Zika, in Malaria-negative Return Travelers

Status: Active not recruiting

Sponsor(s): Hôpital d'Hautepierre

Systematic screening for dengue, chikungunya, and Zika in malaria-negative return travelers is critical due to underdiagnosis and rising risk of autochthonous transmission in France, particularly with established *Aedes albopictus* populations. This prospective study at Str

[See details](#)

2025-04-08

Real-world Effectiveness, Safety and Immunogenicity of Chikungunya Vaccination in Populations at Risk of Severe or Complicated Forms: Prospective Study in La Réunion

Status: Recruiting

Sponsor(s): Centre Hospitalier Universitaire de La Réunion, ANRS, Emerging Infectious Diseases, Région La Réunion, ARS La Réunion, Direction Générale de l'offre de Soins (DGOS)

This prospective study evaluates the real-world effectiveness, safety, and immunogenicity of the IXCHIQ® chikungunya vaccine in high-risk populations in La Réunion, including seniors and those with comorbidities or chronic conditions such as arthritis or fatigue, as defin

[See details](#)

Guidelines and practical information

This section lists official manuals of recommendations for clinical practice or public health policy published by leading health organizations.

HAS	Utilisation du vaccin IXCHIQ dans le contexte épidémique de chikungunya dans les territoires de La Réunion et de Mayotte (2025)
CDC	Information for traveller's : Chikungunya (2024)
WHO	Guidelines on Clinical Management of Chikungunya Fever (2019)
ECDC	Guidelines for mosquito surveillance
Ministère de la Santé et de la Prévention	Recommandations nationales sur la prise en charge du chikungunya (Formes aiguës, formes persistantes) (2014)
PAHO	Preparedness and Response for Chikungunya Virus Introduction in the Americas (2011)
WHO	Guidelines for prevention and control of Chikungunya fever (2009)

Fact sheets

Transmission

CHIKV is an RNA virus from the Alphavirus genus, part of the Togaviridae family, originating in Africa. The disease's name means 'the one who walks bent over,' due to joint and muscle pain. There are four known clades: West African, Asian, ECSA (East/Central/South African), and IOL (Indian Ocean Lineage). The virus is mainly transmitted to humans through *Aedes* mosquitoes (*Aedes aegypti* and *Aedes albopictus*). Less common transmission can occur via contact with infected blood, especially in laboratory and healthcare settings (<1%). Vertical transmission from mother to child during the second trimester of pregnancy and intra-partum transmission during viremia at delivery have also been reported.

Diagnosis

For suspected cases, PCR testing should be done as soon as possible after symptoms appear (viremia lasts about 8 days). Isolated IgM antibodies require a second sample at least 10 days later to confirm seroconversion (IgG appearance). IgG presence alone does not confirm recent infection due to their prolonged persistence.

Symptoms

CHIKV infection is symptomatic in 80% of cases and typically progresses through three clinical stages: acute (day 1–21), post-acute (day 21–3 months), and chronic (beyond 3 months). Initial symptoms are non-specific (fever, headache, rash, muscle pain, and joint pain). Severe forms are more likely in patients with comorbidities, pregnant women, immunocompromised individuals, and people at extreme ages. Mortality for severe cases ranges from 0.5% to 1.3%. Chronic forms, which significantly affect quality of life, impact 20–60% of patients depending on the viral lineage and care quality.

Treatment

There is no approved specific treatment for CHIKV. Management focuses on relieving symptoms and treating rheumatologic complications.

Vaccination

IXCHIQ, developed by Valneva, is the only approved chikungunya vaccine. It is a live-attenuated vaccine given as a single intramuscular dose. It has FDA and EMA approval for individuals aged 18 and older who are not immunocompromised.