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

- Chikungunya is an infectious disease caused by an arbovirus, the chikungunya virus.
- Between 2010 and 2024, no cases had been detected on Réunion Island. In 2025, Réunion experienced a major outbreak, with nearly 54,550 biologically confirmed autochthonous cases of chikungunya and 43 deaths. The end of the outbreak was officially declared on June 24, 2025, by the health authorities. In parallel, Mayotte also experienced active virus circulation, with more than 1,200 cases.
- Mainland France also experienced active circulation of CHIKV, with a total of 787 autochthonous cases and 1,053 imported cases as of 17 October–November, across 15 departments of metropolitan France.

Scientific articles

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

2026-02-27

Single-Cell Sequencing Reveals the Immune Characteristics of Secondary Liver Injury Induced Indirectly by CHIKV Infection in Rhesus Macaques.

Journal: Viruses

Authors: Hao Yang, Yun Yang, Cong Tang, Yanan Zhou, Wenhai Yu, Qing Huang, Haixuan Wang, Daoju Wu, Wenqi Quan, Junbin Wang, Shuaiyao Lu

CHIKV infection in rhesus macaques causes indirect liver injury via immune cell activation, with reduced B cells and increased cytotoxic CD8+ T, NKT, and inflammatory macrophages, suggesting immune-mediated damage.

See details

2026-03-06

Glutamine antagonist DON attenuates chikungunya virus-induced myositis by suppressing inflammatory activation in a murine model.

Journal: Emerg Microbes Infect

Authors: Xinyu Zhang, Yue Zhang, Jiarui Huang, Zhiyong Ma, Hu Yan, Maohua Zhong, Jingyi Yang, Fengjiao Hu, Mengliu Zeng, Mengji Lu, Huimin Yan, Ejuan Zhang

DON, a glutamine antagonist, reduces chikungunya virus-induced myositis in mice by modulating immune response without affecting viral load, depleting innate immune cells, and impairing T cell activation and function, suggesting glutaminolysis inhibition as a potential therapeutic strategy for alphavirus-induced arthritis.

See details

2026-02-07

Live-attenuated chikungunya vaccine in children: a randomized phase 2 trial.

Journal: Nat Med

Authors: Petronela Weisová, Susanne Scheiblauer, Jacqueline Ecker, Martina Schneider, Romana Hochreiter, Annegret Bitzer, Karin Kosulin, Petra Schoengrundner, Ulrike Fuchs, Luz Rodeles, Sonia Mazara, Yeycy Donastorg, Silvia Rivera, Nina Wressnigg, Katrin Dubischar, Vera Buerger, Susanne Eder-Lingelbach, Juan Carlos Jaramillo

Phase 2 trial of live-attenuated chikungunya vaccine (VLA1553) in children aged 1-11 years showed good tolerability, with mild adverse events. Full-dose VLA1553 induced higher neutralizing antibody titers than half-dose, supporting its use in future trials.

See details

2026-02-25

Visualized analysis of core themes and emerging frontiers in global chikungunya virus studies.

Journal: Front Microbiol

Authors: Jing Tian, Yonggang Li, Yuanlong Zhao, Xiaoli Tao

This bibliometric study analyzes 3,709 CHIKV publications (2015-2024), identifying the US, Brazil, and India as top contributors, with Scott C. Weaver as the most prolific author. Key research areas include phylogenetics, epidemiology, pathogenesis, and vaccine development. Future research should focus on viral evolution, immune interactions, and global risk models.

See details

2026-02-17

AGPAT1 is a novel Chikungunya virus receptor on human cells.

Journal: J Virol

Authors: Brohmomoy Basu, Debapriyo Sarmadhikari, Anshula Sharma, Shailendra Asthana, Manjula Kalia, Sudhanshu Vrati

AGPAT1 identified as a novel CHIKV receptor, facilitating binding, uptake, and replication. It interacts with CHIKV's E1 protein and is involved in Ross River virus uptake, aiding antiviral development.

See details

2026-02-17

Reverse vaccinology-based design of a universal multiepitope vaccine against chikungunya virus: Phylogenetic and immunoinformatics approaches.

Journal: Sci Rep

Authors: Mohamad S Hakim

This study designed a universal multiepitope vaccine against CHIKV using phylogenetic and immunoinformatic approaches, identifying 10 high-quality epitopes from conserved structural proteins. The vaccine construct showed high stability, strong TLR3 binding, and robust imm

See details

2026-02-24

Travel-Related Challenges of Chikungunya Virus and Vaccination Options.

Journal: J Epidemiol Glob Health

Authors: Mazin Barry, Mohamad-Hani Temsah, Jaffar A Al-Tawfiq, Ziad A Memish

Chikungunya, spread by Aedes mosquitoes, causes outbreaks with persistent arthritis. No antiviral exists; management is supportive. Travel can introduce the virus to new areas. Awareness is low. Two vaccines, VLA1553 (IXCHIQ) and PXVX0317 (Vimkunya), offer high seroprotec

See details

2026-02-05

Side effects dim hopes for first chikungunya vaccine.

Journal: Science

Authors: Vaishnavi Chandrashekhar

Vaccination of the elderly was suspended during an outbreak on Réunion last year. A new vaccine may be safer.

See details

Relevant news

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

2026-02-12

PAHO warns chikungunya cases circulating among rising local transmission reports

Source: CIDRAP

PAHO reports 313,132 chikungunya cases in 2025, including 170 deaths, with significant transmission in Brazil, Bolivia, and the Guiana Shield. In 2026, Brazil reported 4,544 probable cases. Chikungunya, spread by Aedes mosquitoes, causes fever, joint pain, rash, and can b

See details

2026-02-17

Chikungunya virus disease worldwide overview

Source: ECDC

Every month ECDC provides detailed epidemiological overview of the worldwide transmission of chikungunya virus disease in its weekly threat report (Communicable Diseases Threat Report).

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): Gylden Pharma Ltd

This Phase I trial evaluates the safety and reactogenicity of PepGNP-ChikV, a novel Chikungunya peptide immunotherapy vaccine, in 40 healthy adults. Participants receive two doses 42 days apart, with follow-up for 12 months. Safety monitoring includes solicited local and systemic reactions, unsolicited events, and serious adverse events.

See details

2025-05-27

A Safety and Immunogenicity Study of CHIKV VLP Vaccine in Children.

Status: Recruiting

Sponsor(s): Bavarian Nordic (Group)

The goal of this multi-center, randomized, double-blind, placebo-controlled study is to evaluate the safety and immunogenicity of CHIKV VLP Vaccine in children 1 to \<12 years of age.

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: Not yet 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 study evaluates the efficacy, immunogenicity, and safety of the CHIKV VLP vaccine in adolescents and adults. It employs infectious disease models and advanced analytics to optimize study design, addressing challenges in assessing vaccine efficacy against chikungunya.

See details

2025-07-25

Real-World Study on Chinese Medicine for Treating Chikungunya Fever

Status: Recruiting

Sponsor(s): The Third Affiliated Hospital of Guangzhou University of Traditional Chinese Medicine

This study assesses the efficacy and safety of Chinese Medicine, alone or with Western medicine, for treating chikungunya fever, a viral disease with no specific antiviral treatment. With recent outbreaks in China, Chinese medicine's symptom-relief and syndrome-specific approach may provide a valuable therapeutic option.

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: Enrolling by invitation

Sponsor(s): Valneva Austria GmbH, Fundação Butantan, 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

2025-12-04

Observational Study to Assess the Effectiveness of VLA1553 Vaccine in Preventing Chikungunya During a Pilot Vaccination Strategy in Brazil

Status: Enrolling by invitation

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

This is an observational, non-interventional, test-negative case-control (TNCC) study to estimate the vaccine effectiveness of VLA1553 against Chikungunya virus in a real-world setting.

See details

2025-08-13

A Trial to Evaluate the Safety and Immunogenicity of VLA1553 in Healthy Children

Status: Withdrawn

Sponsor(s): Valneva Austria GmbH

VLA1553-322 is a multicenter, prospective, randomized, double-blind, phase 3 clinical trial evaluating VLA1553 in comparison to a comparator (Nimenrix®) for each stratum (age group). At least 3,000 male and female healthy children aged 1 to 11 years will be enrolled and randomized 3:1 to either VLA1553 (n=2,250) or comparator (Nimenrix®) (n=750).

See details

2025-04-15

Chikungunya Virus Detection in Semen

Status: Not yet recruiting

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

This prospective study investigates Chikungunya virus presence and infectivity in semen, evaluating sperm preparation methods for obtaining virus-free gametes. Fifteen patients with acute infection will provide samples at multiple time points. The study aims to understand viral excretion patterns and enhance the safety of assisted reproduction during epidemics.

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® vaccine in at-risk populations (elderly, comorbid patients) in La Réunion during a chikungunya epidemic, aiming to inform a future cluster randomized trial.

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): Hôpitaux Universitaires de Strasbourg

This study highlights the underdiagnosis of dengue, chikungunya, and zika in malaria-negative return travelers, with 78% not tested, and aims to establish reflex testing protocols for early diagnosis and vector control.

See details

2025-04-28

Trial to Evaluate the Immunogenicity and Safety of the Co-administration of Live Attenuated Dengue and Chikungunya Vaccines Compared to Separate Administration in Adults Aged 18 to 59 Years.

Status: Not yet recruiting

Sponsor(s): Instituto Butantan

This randomized, controlled, double blind trial aims at assessing the safety and immunogenicity profiles of the co-administered Live Attenuated Dengue and Chikungunya vaccines comparatively to the isolated administration, in the adult population aged 18 to 59 years without prior exposure to either arbovirus.

See details

2025-09-17

Against Chikungunya Virus and Neonatal Infection

Status: Not yet recruiting

Sponsor(s): Centre Hospitalier Universitaire de La Réunion

This trial evaluates convalescent plasma transfusion in newborns of mothers with peripartum Chikungunya, assessing survival without encephalitis/encephalopathy within 5 days, compared to an observational cohort.

See details

2025-09-01

Assessment of Chikungunya Virus Seroprevalence Before VLA1553 Vaccination in the Municipalities Selected for Participation in the VLA1553 Pilot Vaccination Strategy in Brazil

Status: Active not recruiting

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

This is a cross-sectional serosurvey using household cluster sampling conducted before the VLA1553 pilot vaccination strategy will be implemented in about 10 municipalities in Brazil.

See details

2026-02-09

VLA1553-403 Pregnancy Surveillance Study

Status: Not yet recruiting

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

This observational study assesses pregnancy and infant outcomes up to 12 weeks postpartum in women exposed to the chikungunya vaccine (VLA1553) during pregnancy or preconception, compared to a matched cohort receiving routine pregnancy vaccines.

See details

2024-10-30

Trial of an Inactivated Chikungunya Virus Vaccine

Status: Completed

Sponsor(s): Najít Technologies (United States), National Institute of Allergy and Infectious Diseases (NIAID)

This Phase 1 trial evaluates the safety and reactogenicity of two dosages (2.5 mcg and 8 mcg) of the HydroVax-005 CHIKV vaccine in 48 healthy adults, administered intramuscularly on Days 1 and 29.

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.