

## WHAT IS CHIKUNGUNYA?

Chikungunya is a mosquito-borne viral disease spreading in the Americas and to Europe[1], caused by the chikungunya virus (CHIKV), a *Togaviridae* virus transmitted by *Aedes* mosquitoes.



## WHO IS AT RISK?

Chikungunya outbreaks have been reported in Asia, Africa, the Americas and recently (2017) in Europe[1]. As of 2017, there have been more than one million reported cases in the Americas[2] and the economic impact is significant (e.g. Colombia outbreak 2014: \$73.6m[3]).

The medical and economic burden is expected to grow as mosquitos, the primary vectors of CHIKV, continue to further spread geographically.

## COUNTRIES AND TERRITORIES WHERE CHIKUNGUNYA CASES HAVE BEEN REPORTED



Data as of May 29, 2018 and does not include countries or territories where only imported cases have been documented. [1]

### References

- 1.CDC – Chikungunya Virus Geographic Distribution: <https://www.cdc.gov/chikungunya/geo/index.html>
- 2.PAHO/WHO data: Number of reported cases of chikungunya fever in the Americas – EW 51 (December 22, 2017)
- 3.Cardona-Ospina et al., Trans R Soc Trop Med Hyg 2015
- 4.Simon F, Javelle E, et al. French guidelines for the management of chikungunya (acute and persistent presentations). November 2014.
- 5.Médecine Mal Infect 2015;45:243–63. doi:10.1016/j.medmal.2015.05.007.
- 6.Weaver SC, Osorio JE, Livengood JA, Chen R, Stinchcomb DT. Chikungunya virus and prospects for a vaccine. Expert Rev Vaccines 2012;11:1087–101. doi:10.1586/erv.12.84.
- 6.Valneva press release: [https://valneva.com/wp-content/uploads/2019/06/2018\\_12\\_21\\_Chik\\_FDA\\_Fast\\_Track\\_PR\\_EN.pdf](https://valneva.com/wp-content/uploads/2019/06/2018_12_21_Chik_FDA_Fast_Track_PR_EN.pdf)

## SYMPTOMS & DIAGNOSIS

Clinical symptoms include acute onset of fever, debilitating joint and muscle pain, headache, nausea and rash, potentially developing into long-term, serious health impairments.

Chikungunya virus causes clinical illness in 60–80%[4] of infected humans around four to seven days after an infected mosquito bite. Complications resulting from the disease include visual, neurological, heart and gastrointestinal manifestations; fatalities have been reported[5] in newborns, adults with underlying conditions and older people.

## TREATMENT & PREVENTION

There are no preventive vaccines or effective treatments available and, as such, chikungunya is considered to be a major public health threat.

### VALNEVA'S VACCINE CANDIDATE - VLA1553

VLA1553 is potentially the first-ever single-shot vaccine against chikungunya.

VLA1553 is a monovalent, single dose, live-attenuated vaccine candidate for protection against chikungunya. The vaccine candidate is designed for prophylactic, active immunization against chikungunya in humans over one year old. The vaccine is targeted to provide long-lasting protection and an anticipated safety profile similar to licensed vaccines for active immunization in adults and children.

The target population segments are travelers, military personnel and individuals at risk living in endemic regions.

VLA1553 was granted Fast Track designation by the FDA in December 2018[6].

#### Positive Phase 1 results for VLA1553:

- The trial VLA1553-101 is being conducted in the U.S. with the objectives of assessing the overall safety and immunogenicity profile after a single vaccination. The Phase 1 study investigates three different dose levels of VLA1553 in 120 healthy adults.
- Phase 1 unblinded results up to Month 7 showed an excellent immunogenicity and safety profile for Valneva's unique, single-shot vaccine candidate.
- VLA1553 was well-tolerated in the low and medium doses and showed excellent local tolerability.
- Excellent immunogenicity profile in all dose groups after a single vaccination with a 100% seroconversion achieved at Day 14 after a single vaccination in all dose groups, sustained at 100% after six months.