

7. Arthropod-Born virus infection (ArBoviruses)

Viruses are called Arboviruses as virus multiplies in the bodies of Arthropods. Transmission is via bite of arthropod vector. e.g. Alpha virus, Flavi virus & Bunya virus. **Vectors: Mosquitoes, ticks and sandflies. Ticks, mosquitoes, fleas and biting flies. Transmission is usually by biting or ingestion.**



CDC/W. Brogdon, J. Cethany/PHIL

Figure 27-12a Brock Biology of Microorganisms 11/e
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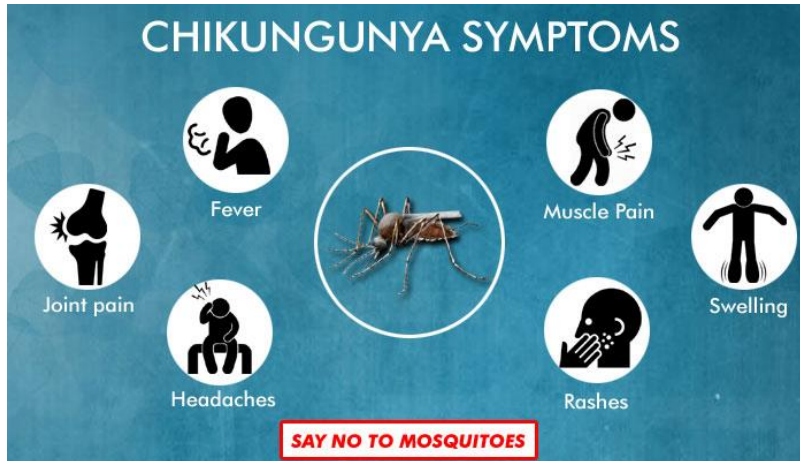
Pfizer Research

Figure 27-7 Brock Biology of Microorganisms 11/e
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- **Animal hosts: many wild birds and small mammals.**
- **Transmission: via bite of insect vector having virus from natural host and infecting man by direct inoculation.**
- **Disease: Encephalitis, fever, hemorrhagic fever**

1. **Alpha virus:** causes Chikungunya – Sudden fever and severe pain in joints



2. **Flavi virus e.g. Yellow fever and Dengue**
- **YELLOW FEVER:** Liver involvement causes Jaundice. 2 types: Urban & Sylvian
 - **Vector:** *Aedes aegypti* mosquito



- **Urban Yellow fever:** reservoir of virus is man & vector is *Aedes aegypti* mosquito
- **Sylvian or Jungle Yellow fever:** reservoir is tree dwelling monkey & vectors are forest mosquitoes.
- **VACCINE:** Yellow fever vaccine-live attenuated virus (17D) 1 dose protects for 10 years. No side effects seen.

DENGUE FEVER:

- Major health problem of the world.
- **Main reservoir is monkeys & main vector is *Aedes aegypti* mosquito.**
- Antegenic types: 4 types 1 to 4.

- Clinically: severe fever, pain in limbs and rash.
- Severe complication: Dengue Hemorrhagic shock syndrome.



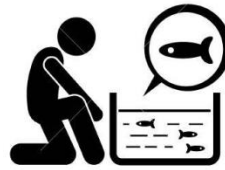
Dengue: Preventions and Controls



Cover containers



Use insecticides



Breed small fishes



Throw away water container

Clear clogged drain



Apply mosquito repellents



Wear long bright clothing



Use netting for baby cot



Setup mosquito trap



Close windows