

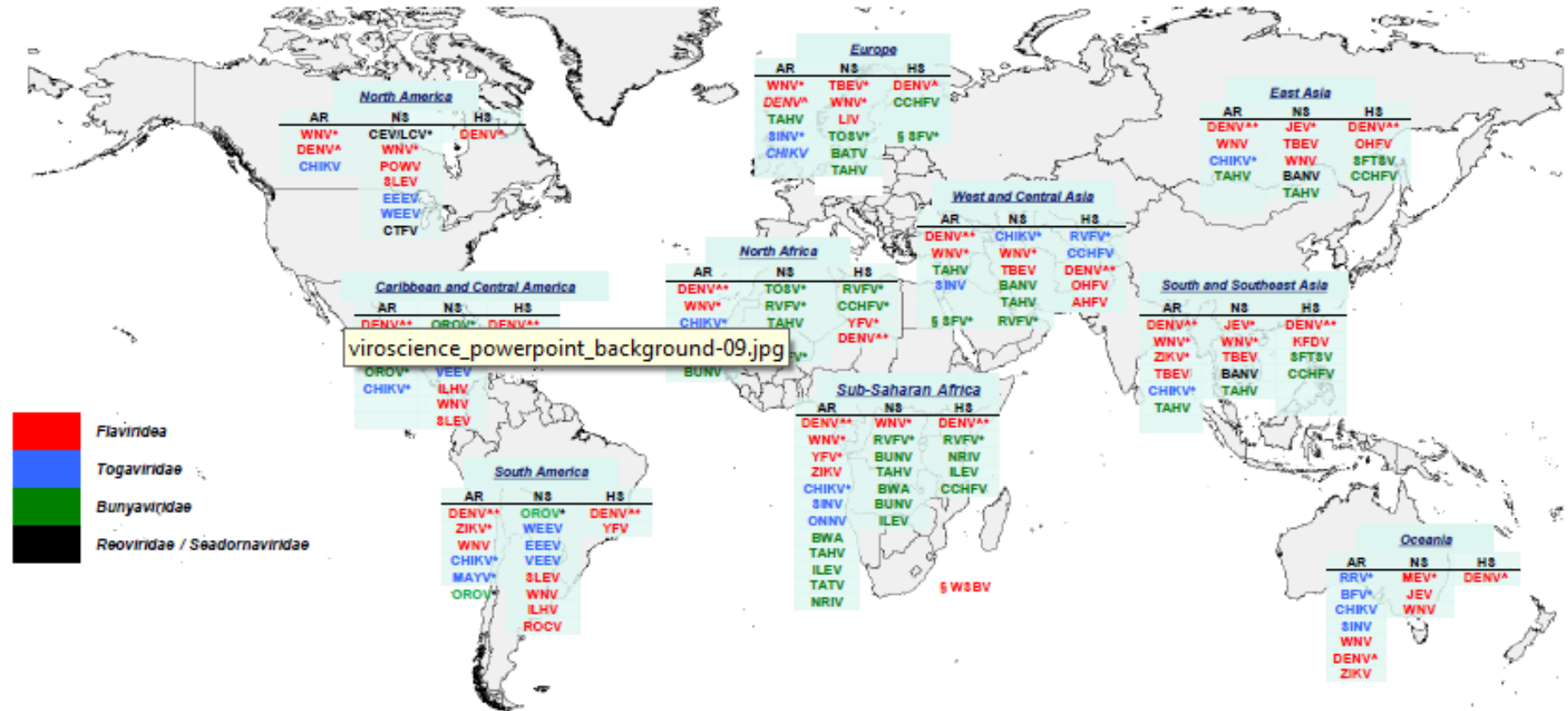
# **2 sisters**

# **Dengue and Chikungunya**

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# Many diseases display overlapping symptoms and geographical distribution Within genus cross-reactivity!



§ Fever with general malaise/myalgia +

Fig 1. Geographical distribution of medically important arboviruses that cause febrile disease in humans.  
Cleton et al 2012 Journal of Clinical virology & Cleton et al 2015 PNTD

AR=Arthritis/arthralgia and rash  
HS=Haemorrhagic symptoms  
NS=neurological symptoms

# Thailanda, Phuket, Kata Beach

## 3-13.01.2019

- 11 year-old, girl
- 09.01.2019 - fever, chills
- 10.01.2019 – rash on legs 2 days, nausea, vomiting, mild arthralgia, mild axillar lymphadenitis
- 14 year-old, girl
- 12.01.2019 - fever, chills, **poliarthralgia especially on hands**, mild axillar lymphadenitis
- 17.01.2019 – rash on upper and lower extremities

# Laboratory results

- 11 years
  - **Positive NS1Ag** for Dengue virus (5<sup>th</sup> day from onset, **RT-PCR** for dengue-1 virus was positive in urine
- 14 years
  - Negative NS1Ag for Dengue virus; **RT PCR positive** for Chikungunya (3<sup>rd</sup> day from onset)
  - IgM for Chikungunya negative (3<sup>rd</sup> day), **positive IgM and IgG** (19<sup>th</sup> day from onset)

# CHIKV vs. DENV

## Comparison of clinical features of CHIKV and DENV infections

Joint pain and stiffness are more common with chikungunya than with dengue.

Clinical Features	Chikungunya Virus (CHIKV)	Dengue Virus (DENV)	Reference
1) Fever, asthenia	Common	Common	[6,8]
2) Myalgia	Possible	Very common	[6]
3) Polyarthritits	Very Common, edematous	None	[56]
4) Tenosynovitis	Yes	None	[57]
5) Leukopenia	None	Yes	[58]
6) Thrombocytopaenia	None	Yes	[59]
7) Rash	Days 1–4, important skin edema	Days 3–7	[6,35,58]
8) Retro-orbital pain	Rare	Common	[60]
9) Hypotension	Possible	Common, Days 5–7	[60,61]
10) Minor bleeding	Chronic polyarthritits up to 1 year	Common	[17,56]
11) Second stage	Possible; Tenosynovitis at M2–M3 Raynaud's syndrome at M2–M3	Fatigue up to 3 mo	[6,56,57,58,62,63]



**Rapid communication**

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# Increased risk of chikungunya infection in travellers to Thailand during ongoing outbreak in tourist areas: cases imported to Europe and the Middle East, early 2019 |

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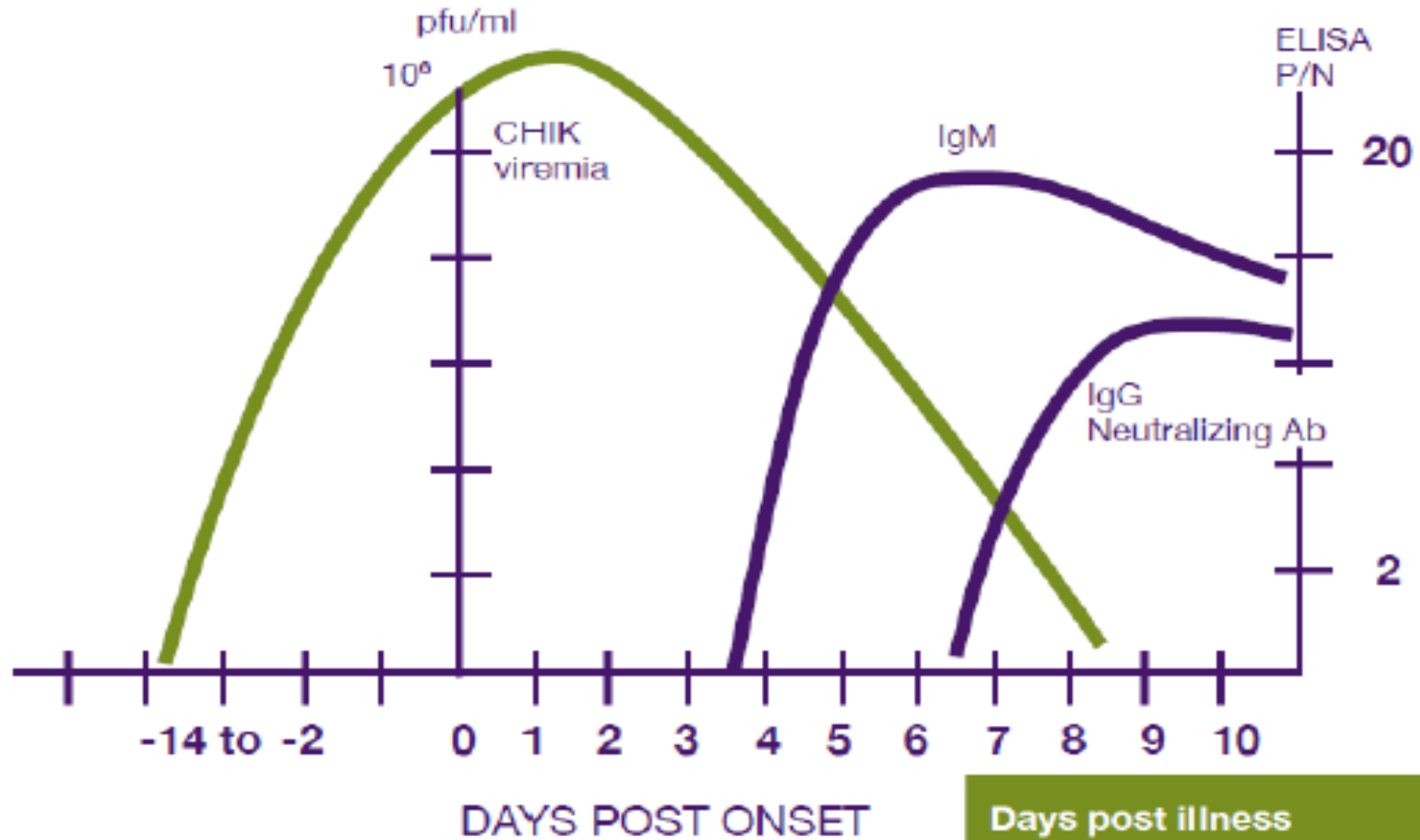
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# Viremia and immune response in Chikungunya virus infection



# Viremia and immune response in Dengue virus infection

