**S1 Table. Description of papers included in systematic results.**

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| --- | --- | --- | --- | --- | --- | --- |
| ID | Tittle | Sampled date | Population | Methodology | Results | Notes/Ref |
| **PUBMED SEARCH** | | | | | | |
| 1 | Dengue hemorrhagic fever in South Vietnam: report of the 1963 outbreak. | 1) An Giang: August 1963  2) HCM: November 1963 | 1) An Giang: 9 + 2 (fatal) acute hemorrhagic children (2y-13y)  2) Saigon: 8 convalescent stage (3y -11y), no hemorrhagic + 75 normal children (3m -12y). | 1)Virus isolation  2)Serology: HI, CF | An Giang: HI: 5/11; CF: 3/9  Saigon: HI:3/8; CF: 3/8  Normal Saigon: HI: 22/75; CF: 16/75 | [[1](#_ENREF_1)] |
| 2 | [Study of anti-Chikungunya antibodies in Vietnamese children in Saigon]. | 1963 | 472 healthy children of Saigon | Antibody (no other information included) | 148/472 (31.3%) had antibody above or equal 1/40  304/472 (64.4%) had antibody above or equal 1/10 | There is a table of percentage of titer for each group age in the paper.[[2](#_ENREF_2)] |
| 3 | [Hemorrhagic fever in Vietnam in 1964-1965. Serologic study with a brief clinica and epidemiologic note]. | 1964-1965 | 156 hemorrhagic fever patients | Pairs of serum samples (no other information included, maybe HI) | 16 cases with increase in antibody | [[3](#_ENREF_3)] |
| 4 | An analysis of fevers of unknown origin in American soldiers in Vietnam. | April 1st 1966 to August 1st 1966 | 110 U.B soldiers from 93rd Evacuation Hospital, Long Binh, South Vietnam, with symptoms: fever, chill, headache | 1)Virus isolation  2)HI paired sera: 1 for acute, 1 for convalescent | HI rises and Virus isolation (+): 10/110 (9%), no HI positive with Dengue | [[4](#_ENREF_4)] |
| 5 | The distribution and prevalence of group A arbovirus neutralizing antibodies among human populations in Southeast Asia and the Pacific islands. | 1972 | General population in South of Vietnam were submitted for serologic confirmation of suspected cases of dengue | PRNT  Sensitivity: 85-97%; Specificity: 90-98% | 31/130 (24%) | Test for 5 group A arbovirus (CHIKV, RRV, Getah, Bebaru, and Sindbis) in 44 locations in SEA and Pacific island.[[5](#_ENREF_5)] |
| 6 | Retrospective seroepidemiological study of chikungunya infection in South Asia, Southeast Asia and the Pacific region. | 2006 | 44 febrile patients | CHIKV IgM capture ELISA (not commercial test)  CHIKV IgG indirect ELISA  FNRT (focus reduction neutralization test) | ELISA:  IgM: 0%  IgG: 22/44 (50%)  FNRT:  IgM: 0%  IgG: 22/44 (50%)  => CHIKV neutralization confirmed cases: 25% | 748 sera from 6 countries in SEA + 52 from Fiji. [[6](#_ENREF_6)] |
| 7 | Dengue and other common causes of acute febrile illness in Asia: an active surveillance study in children. | Jun 2010- Jul 2011 (292 days) | 32 febrile fever from Tien Giang General Hospital, My Tho City, Tien Giang province | NovaLisa™ Chikungunya IgM μ-capture ELISA: paired sera  Sensitivity: 95.5%, Specificity: 100%. | 19/32 cases IgM positive.  Incidence density 18.5 (11.6-28.6) | Cohort study.  5 countries in SEA. [[7](#_ENREF_7)] |
| 8 | Surveillance of dengue and chikungunya infection in Dong Thap, Vietnam: A 13-month study. | Jan 2012 – Feb 2013 | 131 acute fever, with symptoms compatibles with dengue or chikungunya in Dong Thap general hospital | Reverse transcription multiplex PCR | 0% | Cohort study. [[8](#_ENREF_8)] |
| **VIETNAM JOURNAL OF PREVENTIVE MEDICINE SEARCH** | | | | | | |
| 9 | Dengue and other common causes of acute febrile illness of 2-14 years-old children cohort in My Tho 2011 | 9/2010 to 6/2011 | 150 cohort children from 2-14 at My Tho (Tien Giang) to investigate febrile cases | NovaLisa™ Chikungunya IgM μ-capture ELISA: paired sera | -35 febrile episodes (32 children have at least one febrile fever).  -4 CHIKV (+) cases/ 6 Dengue (+) (66.7%)  -15 CHIKV (+) cases/26 Dengue (-) (57.7%)  -The rate of sero converse between the acute and convalescent in CHIK is 9.3% | Cohort study (a part of the 7th study in Pubmed)[[9](#_ENREF_9)] |
| 10 | Aedes aegypti, Aedes albopictus mosquitoes and risk factors for the diffusion of chikungunya in several provinces in Vietnam, 2012-2014 | 9/2012 to 9/2014 | 1) 558 Human sera: Febrile + one of athragia, myalgia, headache, rash, petechial, hemorrhage + epidemic history of traveling to risk places within 12 days before the onset.  2) 1104 Aedes aegypti, and Aedes albopictus mosquitoes from 5 provinces: Ha Tinh, Hue, Quang Tri, Dac Nong, Long An (which border Laos and Cambodia) | RT-PCR with RNA isolation by QIAamp viral RNA Mini kit.  miScript SYBR Green PCR Kit | 1) Human: 0%  2) Mosquitoes positive: 0.4% in Dac Nong (n=285), 0.2% in Long An (n=580) | [[10](#_ENREF_10)] |
| 11 | Chikungunya virus and it'B vector at 5 cross-border provinces between Viet Nam, Laos and Cambodia, 2012- 2014 | Oct 2012 – September 2014 | The same study as 11th | The same study as 11th | 1)Human: 0%  2)2 mosquitoes from Dak Nong and Long An are positive. These 2 mosquitoes later sequenced but the replicate of RNA is too low to analyse (unpublished) | The same study as 10th [[11](#_ENREF_11)] |
| **NATIONAL LIBRARY OF VIETNAM – PHD THESIS STORAGE** | | | | | | |
| 12 | Situation of Hemorrhagic Dengue fever in Southern Vietnam from 1975 to 1990, epidemic data, virology and preventive methods | 1)1978-1982  2)1979 | 1) Mosquitoes, Human blood from Southern Vietnam  2) Healthy human from 4 locations: HCM city (Binh Thanh, D1), Vung Tau, My Tho, Minh Hai | Virus isolation  HI | 1) 12 cases with positive virus isolation from 1978-1982: 6 hemorrhagic fever children, 1 Ae.Aegypti, 1 Ae.Albopictus, 4 C.fatigans  2)Antigen positive in 4 locations | [[12](#_ENREF_12)] |
| 13 | Investigating the circulation of human induced disease viruses from bat in Vietnam | 2006-2009 | 549 bats from 6 species at Hoa Binh, Tuyen Quang, Bac Giang, Quang Binh, Dak Lak, Dak Nong. | ELISA IgG  Neutralizing test (NT50) | ELISA IgG for CHIKV: 11 samples (2.0%): 2 from Charephone plicata at Bắc Giang; 9 from Rousettus leschenaulti at Hòa Bình. However, all of these samples are negative to NT50 => cross activity? | [[13](#_ENREF_13)] |
| **ADDITIONAL PAPERS** | | | | | | |
| 14 | Applying the RT-PCR assay to identify chikungunya virus in hemorrhagic fever patients | 2009 | 50 patients who suffered from acute hemorrhagic fever from 2009 at Thanh Tri, Ha Noi. The admission symptoms include high fever, rash skin, hemorrhage. | A specific and sensitive multi-RT-PCR assay was used as a tool to detect CHIKV/DENV | 4/50 cases were positive with CHIKV , later be confirmed by gene sequencing  3/50 cases were co-infection with CHIKV/DENV | [[14](#_ENREF_14)] |
| 15 | Chikungunya and Zika Virus Cases Detected Against a Backdrop of Endemic Dengue Transmission in Vietnam | 2012 | 8105 children (1-15 years old) with fever of less than 72 hours and dengue-like symptoms | RT-PCR | 3 (+) cases in Bind Duong province.  1 (+) case in Ho Chi Minh City.  All of the strains are closely related to Cambodia strain in 2011. | [[15](#_ENREF_15)] |
| **PRO-MED SEARCH** | | | | | | |
| 16 | VIET NAM (HANOI) SUSPECTED | 22nd Oct 2009 | People in Hanoi |  | 60% of patients with classis dengue symptoms have (-) test for dengue. | [[16](#_ENREF_16)] |
| **GOOGLE SEARCH** | | | | | | |
| 17 | Secondary Dengue infection is more severe | 2010 | People in middle regions, Tay Nguyen. |  | National Institute of hygiene and Epidemiology defined 15 patients with Dengue like symptom but negative to Dengue and positive to CHIKV | [[17](#_ENREF_17)] |
| 18 | The search of Zika virus in Vietnam | Early 2016 | 83 Zika-alike symptoms people from southern Vietnam |  | 9 positive cases of CHIKV in Can Tho | [[18](#_ENREF_18)] |
| 19 | The finding of 56 mosquitoes positive with Zika in VN | 4/2016 | Mosquitoes in Nha Trang province |  | National Institute of Hygiene and Epidemiology: 0% positive with CHIKV | [[19](#_ENREF_19)] |

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