

Table S1. A spatially explicit occurrence database for Zika virus

Country	Locality String	GeoLat	GeoLong	Uncert. (m)	Comments	Study
Angola	Maquela do Zombo	-6.050078	15.108851	4083		[1]
Angola	Beù	-6.231823	15.471298	21525		[1]
Angola	Lobito	- 12.371888	13.562743	5058		[1]
Angola	Mocamedes	- 15.203731	12.153252	3465		[1]
Brazil	Santa Helena Hospital, Camacari, Bahia	- 12.700504	-38.332377	NA	Exact location of hospital	[2]
Brazil	Salvador	- 12.983333	-38.516667	18306	Uncertain (numerous candidates)	[3]
Brazil	Belém	-1.453613	-48.478676	6942		[4]
Brazil	Benevides, Pará	-1.359566	-48.249232	3199		[5]
Brazil	Cametá	-2.25	-49.5	4803		[4]
Brazil	Natal, Rio Grande do Norte	-5.795001	-35.208891		05°47'42"S, 35°12'32"O	[6]
Cambodia	Kampong Speu Province	11.561896	104.34157	60463		[7]
Cameroon	Provincial Hospital Annex and Mount Mary Health Centre in Buea & Cameroon Development Corporation Central Clinic, Tiko, Fako Division, Cameroon	4.075185	9.3699	3573		[8]
Central African Republic	Bozo	5.140642	18.478947	579		[9]
Chile	Easter Island	- 27.116667	- 109.36666 7	13845		[10]
Colombia	Sincelejo	9.304722	-75.397778	3645		[11]
Egypt	Elwan	27.269	30.88			[12]
French Polynesia	Bora Bora	-16.4944	-151.7364	NA		[13]
French Polynesia	French Polynesia				Too broad a region	[10]
French Polynesia	Centre Hospitalier du Taaone	- 17.528796	- 149.54657 3	NA		[14]
French Polynesia	Tahiti				(Duplicate with another)	[15]

Gabon	Cocobeach	1.000186	9.582285	1614		[16]
Gabon	Diba-Diba, Libreville	0.383333	9.45	10421		[16]
Gabon	Nzeng-Ayong, Libreville	0.421697	9.478728	1304		[16]
Gabon	PK6, Libreville	0.405025	9.479887	724		[16]
Gabon	PK8, Libreville	0.410089	9.49259	687		[16]
Gabon	Alenkiri, Libreville	0.304433	9.509842	2041		[16]
India	Paud, Poona, Bombay	18.52404	73.615322	5793		[17]
India	Khandala, Poona, Bombay	18.059182	74.015993	5692		[17]
India	Rasalpur, East Khandesh, Bombay	26.900684	75.424156	2809	Corrected to: Asalpur	[17]
India	Zagadia, Broach, Bombay	21.714349	73.15101	3454	Corrected to: Jhagadia	[17]
India	Ankleswar, Broach, Bombay	21.632356	72.990015	6147	Corrected to: Ankleshwar	[17]
India	Sajad, Broach, Bombay					[17]
India	Jambusar, Broach, Bombay	22.052359	72.800741	2145		[17]
India	Broach, Broach, Bombay	21.694821	72.980501	7010	Corrected to: Bharuch	[17]
India	Bareja, Ahmedabad, Bombay	22.848628	72.591375	1434		[17]
India	Modhwada, Porbander, Saurashtra	21.816703	69.522944	NA	Corrected to: Modhvada	[17]
India	Porbander, Porbander, Saurashtra	21.641346	69.600868	5418	Corrected to: Porbandar	[17]
India	Kutiyaana, Sorath, Saurashtra	21.624099	69.984937	1690	Sorath outdated	[17]
India	Ranavav, Sorath, Saurashtra	21.687339	69.74485	3073	Sorath outdated	[17]
India	Ramtek, Nagpur, Madhya Pradesh	21.395514	79.327017	3556	Sorath outdated	[17]
India	Unrer, Nagpur, Madhya Pradesh				Could not be located	[17]
India	Kamptee, Nagpur, Madhya Pradesh	21.217137	79.194531	3531		[17]
India	Mehbubnagar, Mehbubnagar, Hyderabad	16.567033	73.737634	3269	Corrected to Mahabubnagar	[17]

India	Tiruvellore, Chingleput, Madras	13.143745	79.905682	3613	Corrected to: Tiruvallur	[17]
Indonesia	Jakarta	-6.2182	106.8584	23109		[18]
Indonesia	Tegalyoso Hospital, Klaten, Central Java	-7.705833	110.606389	4681		[19]
Indonesia	Lombok	-8.554324	116.293132	58689		[20]
Malaysia	Bentong, West Central Mal.	3.5316	101.9038	7068		[21]
Micronesia	Yap Island	9.533149	138.11617	NA		[22]
Micronesia	Yap Island				(Duplicate with another)	[23]
Micronesia	Federated States of Micronesia				Too broad a region	[10]
New Caledonia	New Caledonia				Too broad a region	[10]
Nigeria	Kainji Lake Basin	10.394167	4.555556	64023		[24]
Nigeria	Ikeja near Lagos	6.594222	3.337475	4019		[25]
Nigeria	Oshogbo, Oyo State	7.781975	4.549158	6627		[26]
Nigeria	Igbo-Ora, Oyo State	7.742222	3.804444	1785		[26]
Nigeria	Ibadan, Oyo State	7.387778	3.896389	17815		[26]
Nigeria	Oyo, Oyo State	7.840178	3.931335	12843		[26]
Nigeria	Tagwe (Miango), Jos Plateau	9.85	8.683333	7840		[27]
Nigeria	Afikpo Division	5.893121	7.937353	5781	Approximate	[28]
Panama	Utupo	9.137909	-77.930758	1266		[29]
Phillipines	Cebu City	10.3	123.9	16394		[30]
Phillipines	Sapangbato Field	15.175368	120.513715	3036		[31]
Phillipines	Negritos Jungle					[31]
Phillipines	Manila Urban	14.5833	121	25288		[31]
Senegal	Ke'dougou region, SE Sen.	12.550012	-12.183355	NA	12°33' N, 12°11' W	[32]
Senegal	Bandafassi, SE Sen.	12.5406	-12.3077	3951		[33]
Thailand	Bangkok	13.753979	100.501444	47411		[34]
Uganda	Zika Forest	0.124167	32.525556	NA		[35]
Uganda	Madi District, Laropi, Dufile	3.560679	31.880368	10138		[36]
Uganda	Mengo B, Luwero, Bukomero,	0.842124	32.492496	2445		[36]

	Ntenjeru and Nakasongol					
Vanuata	Vanuatu				Too broad a region	[37]
Vietnam	Tonkin/Tong-King, Red River Delta	22	105	2776		[34]

Literature Cited

- [1] Kokernot, R. H., Casaca, V. M. R., Weinbren, M. P. & McIntosh, B. M. Survey for antibodies against arthropod-borne viruses in the sera of indigenous residents of Angola. *T. Roy. Soc. Trop. Med. H.* **59**, 563-570 (1965).
- [2] Campos, G.S., Bandeira, A.C. & Sardi, S.I. Zika virus outbreak, Bahia, Brazil. *Emerg. Infect. Dis.* **21**, 1885 (2015).
- [3] Cardoso, C.W., *et al.* Outbreak of Exanthematous Illness Associated with Zika, Chikungunya, and Dengue Viruses, Salvador, Brazil. *Emerg. Infect. Dis.* **21**, 2274–2276 (2015).
- [4] Causey, O.R., & Theiler, M. Virus antibody survey on sera of residents of the Amazon Valley in Brazil. *Am. J. Trop. Med. Hyg.* **7**, 36-41 (1958).
- [5] Pan American Health Organization. Epidemiological Alert: Neurological syndrome, congenital malformations, and Zika virus infection. Implications for public health in the Americas. 1 December 2015.
http://www.paho.org/hq/index.php?option=com_docman&task=doc_download&Itemid=&gid=32405&lang=en. Accessed 2/10/2016
- [6] Zanluca, C., *et al.* First report of autochthonous transmission of Zika virus in Brazil. *Mem. I. Oswaldo Cruz* **110**, 569-572 (2015).
- [7] Heang, V., *et al.* Zika virus infection, Cambodia, 2010. *Emerg. Infect. Dis.* **18**, 349 (2012).
- [8] Fokam, E. B., *et al.* Silent circulation of arboviruses in Cameroon. *E. Afr. Med. J.* **87**, 262-268 (2010).
- [9] Berthet, N., *et al.* Molecular Characterization of Three Zika Flaviviruses, Obtained from Sylvatic Mosquitoes in the Central African Republic. *Vector Borne Zoonotic Dis* **14**, 862-865 (2014).
- [10] Musso, D., Nilles, E.J. & Cao-Lormeau, V.M. Rapid spread of emerging Zika virus in the Pacific area. *Clin. Microbiol. Infec.* **20**, O595-O596 (2014).
- [11] Camacho E, Paternina-Gomez M, Blanco PJ, Osorio JE, Aliota MT. Detection of autochthonous Zika virus transmission in Sincelejo, Colombia. *Emerg Infect Dis.* 2016 May.
<http://dx.doi.org/10.3201/eid2205.160023>
- [12] Smithburn, K. C., *et al.* Immunity to certain arthropod-borne viruses among indigenous residents of Egypt. *Am. J. Trop. Med. H.* **3**, 9-18 (1954).
- [13] Kutsuna, S., *et al.* Two cases of Zika fever imported from French Polynesia to Japan, December 2013 to January 2014. *Euro. Surveill.* **19**, 1-5 (2014).
- [14] Cao-Lormeau, V.M. *et al.* Zika Virus, French Polynesia, South Pacific, 2013. DOI:
<http://dx.doi.org/10.3201/eid2006.140138>
- [15] Wæhre T., Maagard, A., Tappe D., Cadar D. & Schmidt-Chanasit, J. Zika Virus Infection after Travel to Tahiti, December 2013. *Emerg. Infect. Dis.* **20**, 1412-1414 (2014).

- [16] Grard, G., *et al.* Zika virus in Gabon (Central Africa)–2007: a new threat from *Aedes albopictus*. *PLoS Negl. Trop. Dis.* **8**, e2681 (2014).
- [17] Smithburn, K. C., Kerr, J.A. & Gatne, P.B. Neutralizing antibodies against certain viruses in the sera of residents of India. *J. Immunol.* **72**, 248-257 (1954).
- [18] Kwong, J.C., Druce, J.D. & Leder, K. Zika virus infection acquired during brief travel to Indonesia. *Am. J. Trop. Med. H.* **89**, 516-517 (2013).
- [19] Olson, J. G. & Ksiazek, T.G. Zika virus, a cause of fever in Central Java, Indonesia. *T. Roy. Soc. Trop. Med. H.* **75**, 389-393 (1981).
- [20] Olson, J. G., *et al.* A survey for arboviral antibodies in sera of humans and animals in Lombok, Republic of Indonesia. *Ann. Trop. Med. Parasit.* **77**, 131-137 (1983).
- [21] Marchette, N. J., Garcia, R. & Rudnick, A. Isolation of Zika virus from *Aedes aegypti* mosquitoes in Malaysia. *Am. J. Trop. Med. H.* **18**, 411-415 (1969).
- [22] Duffy, M.R., *et al.* Zika virus outbreak on Yap Island, federated states of Micronesia. *N. Eng. J. Med.* **360**, 2536-2543 (2009).
- [23] Lanciotti, R.S., *et al.* Genetic and serologic properties of Zika virus associated with an epidemic, Yap State, Micronesia, 2007. *Emerg. Infect. Dis.* **14**, 1232 (2008).
- [24] Adekolu-John, E. O. & Fagbami, A.H. Arthropod-borne virus antibodies in sera of residents of Kainji Lake Basin, Nigeria 1980. *T. Roy. Soc. Trop. Med. H.* **77**, 149-151(1983).
- [25] Boorman, J. P. T., & Porterfield, J.S. A simple technique for infection of mosquitoes with viruses transmission of Zika virus. *T. Roy. Soc. Trop. Med. H.* **50**, 238-242 (1956).
- [26] Fagbami, A. H. Zika virus infections in Nigeria: virological and seroepidemiological investigations in Oyo State. *J. Hygiene - Cambridge* **83**, 213-219 (1979).
- [27] Lee, V. H., & Moore, D.L. Vectors of the 1969 yellow fever epidemic on the Jos Plateau, Nigeria. *Bull. World Health Organ.* **46**, 669 (1972).
- [28] Macnamara, F.N. Zika virus: a report on three cases of human infection during an epidemic of jaundice in Nigeria. *T. Roy. Soc. Trop. Med. H.* **48**, 139-145 (1954).
- [29] <http://www.minsa.gob.pa/noticia/ministerio-de-salud-comunica-la-poblacion-panamena-sobre-el-virus-zika>
- [30] Alera, M.T., *et al.* Zika virus infection, Philippines, 2012. *Emerg. Infect. Dis.* **21**, 722 (2015).
- [31] Hammon, W., Schrack, W.D. & Sather, G.E. Serological Survey for Arthropod-Borne Virus Infections in the Philippines. *Am. J. Trop. Med. Hyg.* **7**, 323-328 (1958).
- [32] Diallo, D., *et al.* Zika virus emergence in mosquitoes in southeastern Senegal, 2011. *PloS one* **9**, e109442 (2014).

- [33] Foy, B.D., *et al.* Probable non–vector-borne transmission of Zika virus, Colorado, USA. *Emerg. Infect. Dis.* **17**, 880 (2011).
- [34] Pond, W.L. Arthropod-borne virus antibodies in sera from residents of South-East Asia. *T. Roy. Soc. Trop. Med. H.* **57**, 364-371 (1963).
- [35] Dick, G. W. A., Kitchen, S.F. & Haddock, A.J.. Zika virus (I). Isolations and serological specificity. *T. Roy. Soc. Trop. Med. H.* **46**, 509-520 (1952).
- [36] Henderson, B. E., Kirya, G.B. & Hewitt, L.E. Serological survey for arboviruses in Uganda, 1967-69. *Bull. World Health Organ.* **42**, 797 (1970).
- [37] Musso, D., Cao-Lormeau, V.M. & Gubler, D.J.. Zika virus: following the path of dengue and chikungunya? *Lancet* **386**, 243-244 (2015).