

REFERENCES

- Abraham, E. and Jacobs-Lorena, M., 2004. Mosquito midgut barriers to malaria parasite development. *Insect Biochemistry and Molecular Biology*, 34(7), pp.667-671.
- Achee, N., Bangs, M., Farlow, R., Killeen, G., Lindsay, S., Logan, J., Moore, S., Rowland, M., Sweeney, K., Torr, S., Zwiebel, L. and Grieco, J., 2012. Spatial repellents: from discovery and development to evidence-based validation. *Malaria Journal*, 11
- Alkuriji, M., Al-Fageeh, M., Shaher, F. and Almutairi, B., 2020. Dengue Vector Control: A Review for Wolbachia-Based Strategies. *Biosciences Biotechnology Research Asia*, 17(03), pp.507-515.
- Anders, K., Indriani, C., Ahmad, R., Tantowijoyo, W., Arguni, E., Andari, B., Jewell, N., Rances, E., O'Neill, S., Simmons, C. and Utarini, A., 2018. The AWED trial (Applying Wolbachia to Eliminate Dengue) to assess the efficacy of Wolbachia-infected mosquito deployments to reduce dengue incidence in Yogyakarta, Indonesia: study protocol for a cluster randomised controlled trial. *Trials*, 19(1).
- Anders, K., Indriani, C., Ahmad, R., Tantowijoyo, W., Arguni, E., Andari, B., Jewell, N., Rances, E., O'Neill, S., Simmons, C. and Utarini, A., 2021. *The AWED trial* (Applying Wolbachia to Eliminate Dengue) to assess the efficacy of Wolbachia-infected mosquito deployments to reduce dengue incidence in Yogyakarta, Indonesia: study protocol for a cluster randomised controlled trial.
- Bowman, 2016. Is Dengue Vector Control Deficient in Effectiveness or Evidence?: Systematic Review and Meta-analysis.
- Blagrove, M., Arias-Goeta, C., Failloux, A. and Sinkins, S., 2021. Wolbachia strain wMel induces cytoplasmic incompatibility and blocks dengue transmission in *Aedes albopictus*.
- Carlton, J., 2018. Malaria parasite evolution in a test tube. *Science*, 359(6372), pp.159-160.
- Dahmania, H. and Mediannikov, O., 2020. Mosquito-Borne Diseases Emergence/Resurgence and How to Effectively Control It Biologically. *Pathogens*, 9(4), p.310.
- Dinglasan, R., Devenport, M., Florens, L., Johnson, J., McHugh, C., Donnelly-Doman, M., Carucci, D., Yates, J. and Jacobs-Lorena, M., 2009. The *Anopheles gambiae* adult midgut peritrophic matrix proteome. *Insect Biochemistry and Molecular Biology*, 39(2), pp.125-134.
- Downs, W., 2009. Dengue Hemorrhagic Fever: Diagnosis, Treatment and Control. *The American Journal of Tropical Medicine and Hygiene*, 36(3), pp.670-670.
- Duong, V., Lambrechts, L., Paul, R., Ly, S., Lay, R., Long, K., Huy, R., Tarantola, A., Scott, T., Sakuntabhai, A. and Buchy, P., 2015. Asymptomatic humans transmit dengue virus to mosquitoes. *Proceedings of the National Academy of Sciences*, 112(47), pp.14688-14693.
- Durovni, B., Saraceni, V., Eppinghaus, A., Riback, T., Moreira, L., Jewell, N., Dufault, S., O'Neill, S., Simmons, C., Tanamas, S. and Anders, K., 2021. The impact of large-scale deployment of Wolbachia mosquitoes on dengue and other Aedes-borne diseases in Rio de Janeiro and



UNIVERSITAS
GADJAH MADA

A REVIEW ON THE IMPACTS OF THE DEPLOYMENT OF WOLBACHIA-INFECTED MOSQUITOES IN
REDUCING DENGUE AND
MALARIA DISEASE BURDEN

BARATH, Prof. dr. Tri Baskoro T. Satoto, M.Sc., Ph.D. ;dr. Ajib Diptyanusa, DTM&H., MCTM. ;dr. Tridjoko Hadia
Universitas Gadjah Mada, 2022 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Niterói, Brazil: study protocol for a controlled interrupted time series analysis using routine disease surveillance data.

Fletcher, T. and Beeching, N., 2013. Malaria. *Journal of the Royal Army Medical Corps*, 159(3), pp.158-166.

Flores, H. and O'Neill, S., 2018. Controlling vector-borne diseases by releasing modified mosquitoes. *Nature Reviews Microbiology*, 16(8), pp.508-518.

Frentiu, F., Robinson, J., Young, P., McGraw, E. and O'Neill, S., 2010. Wolbachia-Mediated Resistance to Dengue Virus Infection and Death at the Cellular Level. *PLoS ONE*, 5(10), p.e13398.

Garcia, L., 2010. Malaria. *Clinics in Laboratory Medicine*, 30(1), pp.93-129.

Ghosh, A., Edwards, M. and Jacobs-Lorena, M., 2000. The Journey of the Malaria Parasite in the Mosquito: Hopes for the New Century. *Parasitology Today*, 16(5), pp.196-201.

Gomes, F., Hixson, B., Tyner, M., Ramirez, J., Canepa, G., Alves e Silva, T., Molina-Cruz, A., Keita, M., Kane, F., Traoré, B., Sogoba, N. and Barillas-Mury, C., 2021. Effect of naturally occurring Wolbachia in *Anopheles gambiae* s.l. mosquitoes from Mali on Plasmodium falciparum malaria transmission.

Hammond, A. and Galizi, R., 2017. Gene drives to fight malaria: current state and future directions. *Pathogens and Global Health*, 111(8), pp.412-423.

Hasan, S., Jamdar, S., Alalowi, M. and Al Ageel Al Beaiji, S., 2016. Dengue virus: A global human threat: Review of literature. *Journal of International Society of Preventive and Community Dentistry*, 6(1), p.1.

Hoffmann, A., Montgomery, B., Popovici, J., Iturbe-Ormaetxe, I., Johnson, P., Muzzi, F., Greenfield, M., Durkan, M., Leong, Y., Dong, Y., Cook, H., Axford, J., Callahan, A., Kenny, N., Omodei, C., McGraw, E., Ryan, P., Ritchie, S., Turelli, M. and O'Neill, S., 2015. Successful establishment of Wolbachia in *Aedes* populations to suppress dengue transmission. *Nature*, 476(7361), pp.454-457.

Hughes, G. and Rasgon, J., 2013. Transinfection: a method to investigate Wolbachia-host interactions and control arthropod-borne disease. *Insect Molecular Biology*, 23(2), pp.141-151.

Hughes, G., Koga, R., Xue, P., Fukatsu, T. and Rasgon, J., 2011. Wolbachia Infections Are Virulent and Inhibit the Human Malaria Parasite *Plasmodium Falciparum* in *Anopheles Gambiae*. *PLoS Pathogens*, 7(5), p.e1002043

Indriani, C., Tantowijoyo, W., Rancès, E., Andari, B., Prabowo, E., Yusdi, D., Ansari, M., Wardana, D., Supriyati, E., Nurhayati, I., Ernesia, I., Setyawan, S., Fitriana, I., Arguni, E., Amelia, Y., Ahmad, R., Jewell, N., Dufault, S., Ryan, P., Green, B., McAdam, T., O'Neill, S., Tanamas, S., Simmons, C., Anders, K. and Utarini, A., 2021. Reduced dengue incidence following deployments of Wolbachia-infected *Aedes aegypti* in Yogyakarta, Indonesia: a quasi-experimental trial using controlled interrupted time series analysis.



UNIVERSITAS
GADJAH MADA

A REVIEW ON THE IMPACTS OF THE DEPLOYMENT OF WOLBACHIA-INFECTED MOSQUITOES IN REDUCING DENGUE AND MALARIA DISEASE BURDEN

BARATH, Prof. dr. Tri Baskoro T. Satoto, M.Sc., Ph.D. ;dr. Ajib Diptyanusa, DTM&H., MCTM. ;dr. Tridjoko Hadia
Universitas Gadjah Mada, 2022 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Iturbe-Ormaetxe, I., Walker, T. and O' Neill, S., 2011. Wolbachia and the biological control of mosquito-borne disease. *EMBO reports*, 12(6), pp.508-518.

Joshi, D., McFadden, M., Bevins, D., Zhang, F. and Xi, Z., 2021. Wolbachia strain w AlbB confers both fitness costs and benefit on *Anopheles stephensi*.

Kambris, Z., Blagborough, A., Pinto, S., Blagrove, M., Godfray, H., Sinden, R. and Sinkins, S., 2021. Wolbachia Stimulates Immune Gene Expression and Inhibits Plasmodium Development in *Anopheles gambiae*.

Kitrayapong, P., Baimai, V. and O'Neill, S., 2021. Field prevalence of Wolbachia in the mosquito vector *Aedes albopictus*.

Knerer, G., Currie, C. and Brailsford, S., 2021. The economic impact and cost-effectiveness of combined vector-control and dengue vaccination strategies in Thailand: results from a dynamic transmission model.

Knols, B., Farenhorst, M., Andriessen, R., Snetselaar, J., Suer, R., Osinga, A., Knols, J., Deschieterre, J., Ng'habi, K., Lyimo, I., Kessy, S., Mayagaya, V., Sperling, S., Cordel, M., Sternberg, E., Hartmann, P., Mnyone, L., Rose, A. and Thomas, M., 2016. Eave tubes for malaria control in Africa: an introduction. *Malaria Journal*, 15(1).

Mace, K., Lucchi, N. and Tan, K., 2021. Malaria Surveillance — United States, 2017. *MMWR. Surveillance Summaries*, 70(2), pp.1-35.

Mazarin, N., Rosenthal, J. and Devenge, J., 2014. Dengue materno-fœtale au cours de l'épidémie de 2009–2010 en Guadeloupe : à propos de 4 cas. *Archives de Pédiatrie*, 21(7), pp.745-749.

Medlock, J., Avenell, D., Barrass, I. and Leach, S., 2006. Analysis of the potential for survival and seasonal activity of *Aedes albopictus* (Diptera: Culicidae) in the United Kingdom. *Journal of Vector Ecology*, 31(2), pp.292-304.

McMeniman, C., Lane, R., Cass, B., Fong, A., Sidhu, M., Wang, Y. and O'Neill, S., 2009. Stable Introduction of a Life-Shortening Wolbachia Infection into the Mosquito *Aedes aegypti*. *Science*, 323(5910), pp.141-144.

McMeniman, C. and O'Neill, S., 2010. A Virulent Wolbachia Infection Decreases the Viability of the Dengue Vector *Aedes aegypti* during Periods of Embryonic Quiescence. *PLoS Neglected Tropical Diseases*, 4(7), p.e748.

Morrison, A., Zielinski-Gutierrez, E., Scott, T. and Rosenberg, R., 2008. Defining Challenges and Proposing Solutions for Control of the Virus Vector *Aedes aegypti*.

Ndii, M., Allingham, D., Hickson, R. and Glass, K., 2021. The effect of Wolbachia on dengue outbreaks when dengue is repeatedly introduced. [online] Ideas.repec.org. Available at: <<https://ideas.repec.org/a/eee/thpobi/v111y2016icp9-15.html>> [Accessed 29 December 2021].

Niang, E., Bassene, H., Makoundou, P., Fenollar, F., Weill, M. and Mediannikov, O., 2021. First report of natural Wolbachia infection in wild *Anopheles funestus* population in Senegal.



- Nguyen, N., Thi Hue Kien, D., Tuan, T., Quyen, N., Tran, C., Vo Thi, L., Thi, D., Nguyen, H., Farrar, J., Holmes, E., Rabaa, M., Bryant, J., Nguyen, T., Nguyen, H., Nguyen, L., Pham, M., Nguyen, H., Luong, T., Wills, B., Nguyen, C., Wolbers, M. and Simmons, C., 2013. Host and viral features of human dengue cases shape the population of infected and infectious *Aedes aegypti* mosquitoes. *Proceedings of the National Academy of Sciences*, 110(22), pp.9072-9077.
- Paupy, C., Ollomo, B., Kamgang, B., Moutailler, S., Rousset, D., Demanou, M., Hervé, J., Leroy, E. and Simard, F., 2010. Comparative Role of *Aedes albopictus* and *Aedes aegypti* in the Emergence of Dengue and Chikungunya in Central Africa. *Vector-Borne and Zoonotic Diseases*, 10(3), pp.259-266.
- Pinto, S., Riback, T., Sylvestre, G., Costa, G., Peixoto, J., Dias, F., Tanamas, S., Simmons, C., Dufault, S., Ryan, P., O'Neill, S., Muzzi, F., Kutcher, S., Montgomery, J., Green, B., Smithyman, R., Eppinghaus, A., Saraceni, V., Durovni, B., Anders, K. and Moreira, L., 2021. Effectiveness of Wolbachia-infected mosquito deployments in reducing the incidence of dengue and other *Aedes*-borne diseases in Niterói, Brazil: A quasi-experimental study.
- Pouliot, S., Xiong, X., Harville, E., Paz-Soldan, V., Tomashek, K., Breart, G. and Buekens, P., 2010. Maternal Dengue and Pregnancy Outcomes. *Obstetrical & Gynecological Survey*, 65(2), pp.107-118.
- Reyes, J., Suzuki, Y., Carvajal, T., Muñoz, M. and Watanabe, K., 2021. Intracellular Interactions between Arboviruses and *Wolbachia* in *Aedes aegypti*.
- Ryan, P., Turley, A., Wilson, G., Hurst, T., Retzki, K., Brown-Kenyon, J., Hodgson, L., Kenny, N., Cook, H., Montgomery, B., Paton, C., Ritchie, S., Hoffmann, A., Jewell, N., Tanamas, S., Anders, K., Simmons, C. and O'Neill, S., 2021. Establishment of wMel Wolbachia in *Aedes aegypti* mosquitoes and reduction of local dengue transmission in Cairns and surrounding locations in northern Queensland, Australia
- Schaefer TJ, Panda PK, Wolford RW. Dengue Fever. [Updated 2021 Aug 11]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK430732/>
- Scott, T., Amerasinghe, P., Morrison, A., Lorenz, L., Clark, G., Strickman, D., Kittayapong, P. and Edman, J., 2000. Longitudinal Studies of *Aedes aegypti* (Diptera: Culicidae) in Thailand and Puerto Rico: Blood Feeding Frequency. *Journal of Medical Entomology*, 37(1), pp.89-101.
- Shaw, W., Marcenac, P., Childs, L., Buckee, C., Baldini, F., Sawadogo, S., Dabiré, R., Diabaté, A. and Catteruccia, F., 2021. Wolbachia infections in natural *Anopheles* populations affect egg laying and negatively correlate with *Plasmodium* development.
- Sternberg, E., Cook, J., Ahoua Alou, L., Aoura, C., Assi, S., Doudou, D., Koffi, A., N'Guessan, R., Oumbouke, W., Smith, R., Worrall, E., Kleinschmidt, I. and Thomas, M., 2018. Evaluating the impact of screening plus eave tubes on malaria transmission compared to current best practice in central Côte d'Ivoire: a two armed cluster randomized controlled trial. *BMC Public Health*, 18(1).



UNIVERSITAS
GADJAH MADA

A REVIEW ON THE IMPACTS OF THE DEPLOYMENT OF WOLBACHIA-INFECTED MOSQUITOES IN
REDUCING DENGUE AND
MALARIA DISEASE BURDEN

BARATH, Prof. dr. Tri Baskoro T. Satoto, M.Sc., Ph.D. ;dr. Ajib Diptyanusa, DTM&H., MCTM. ;dr. Tridjoko Hadia
Universitas Gadjah Mada, 2022 | Diunduh dari <http://etd.repository.ugm.ac.id/>

- Syafruddin, D., Hendarto, J., Achee, N., Bangs, M., Baird, J., Grieco, J., Sidik, D., Elyazar, I., Chan, K., Nixon, C., Asih, P., Wahid, I., Nurleila, S., Bøgh, C. and Ishak, H., 2014. Impact of a Spatial Repellent on Malaria Incidence in Two Villages in Sumba, Indonesia. *The American Journal of Tropical Medicine and Hygiene*, 91(6), pp.1079-1087.
- Sinka, M., Bangs, M., Manguin, S., Rubio-Palis, Y., Chareonviriyaphap, T., Coetzee, M., Mbogo, C., Hemingway, J., Patil, A., Temperley, W., Gething, P., Kabaria, C., Burkot, T., Harbach, R. and Hay, S., 2012. A global map of dominant malaria vectors. *Parasites & Vectors*, 5(1).
- Smith, R., Vega-Rodríguez, J. and Jacobs-Lorena, M., 2014. The Plasmodium bottleneck: malaria parasite losses in the mosquito vector. *Memórias do Instituto Oswaldo Cruz*, 109(5), pp.644-661.
- Tjaden, N., Thomas, S., Fischer, D. and Beierkuhnlein, C., 2013. Extrinsic Incubation Period of Dengue: Knowledge, Backlog, and Applications of Temperature Dependence. *PLoS Neglected Tropical Diseases*, 7(6), p.e2207.
- Turley, A., Zalucki, M., O'Neill, S. and McGraw, E., 2013. Transinfected Wolbachia have minimal effects on male reproductive success in *Aedes aegypti*. *Parasites & Vectors*, 6(1).
- Turley, A., Moreira, L., O'Neill, S. and McGraw, E., 2009. Wolbachia Infection Reduces Blood-Feeding Success in the Dengue Fever Mosquito, *Aedes aegypti*.
- Utarini, A., Indriani, C., Ahmad, R., Tantowijoyo, W., Arguni, E., Ansari, M., Supriyati, E., Wardana, D., Meitika, Y., Ernesia, I., Nurhayati, I., Prabowo, E., Andari, B., Green, B., Hodgson, L., Cutcher, Z., Rancès, E., Ryan, P., O'Neill, S., Dufault, S., Tanamas, S., Jewell, N., Anders, K. and Simmons, C., 2021. Efficacy of Wolbachia-Infected Mosquito Deployments for the Control of Dengue.
- Vanlerberghe, V., McCall, P., Jirarojwatana, R., Apiwathnasorn, C., Jirarojwatana, S., Van der Stuyft, P., Lenhart, A. and Trongtokit, Y., 2013. Coverage-Dependent Effect of Insecticide-Treated Curtains for Dengue Control in Thailand. *The American Journal of Tropical Medicine and Hygiene*, 89(1), pp.93-98.
- Walker, T., Johnson, P., Moreira, L., Iturbe-Ormaetxe, I., Frentiu, F., McMeniman, C., Leong, Y., Dong, Y., Axford, J., Kriesner, P., Lloyd, A., Ritchie, S., O'Neill, S. and Hoffmann, A., 2011. The wMel Wolbachia strain blocks dengue and invades caged *Aedes aegypti* populations. *Nature*, 476(7361), pp.450-453.
- Walker, T. and Moreira, L., 2011. Can Wolbachia be used to control malaria?. *Memórias do Instituto Oswaldo Cruz*, 106(suppl 1), pp.212-217.
- Wiwanitkit, V., 2011. Concurrent malaria and dengue infection: a brief summary and comment. *Asian Pacific Journal of Tropical Biomedicine*, 1(4), pp.326-327.
- Who.int. 2019. Dengue and severe dengue. [online] Available at: <https://www.who.int/news-room/fact-sheets/detail/dengue-and-severe-dengue>.
- Who.int. 2020. Vector-borne diseases. [online] Available at: <https://www.who.int/news-room/fact-sheets/detail/vector-borne-diseases>.



UNIVERSITAS
GADJAH MADA

A REVIEW ON THE IMPACTS OF THE DEPLOYMENT OF WOLBACHIA-INFECTED MOSQUITOES IN
REDUCING DENGUE AND

MALARIA DISEASE BURDEN

BARATH, Prof. dr. Tri Baskoro T. Satoto, M.Sc., Ph.D. ;dr. Ajib Diptyanusa, DTM&H., MCTM. ;dr. Tridjoko Hadi

Universitas Gadjah Mada, 2022 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Who.int. 2021. Fact sheet about malaria. [online] Available at: <https://www.who.int/news-room/fact-sheets/detail/malaria>.

Ye, Y., Carrasco, A., Frentiu, F., Chenoweth, S., Beebe, N., van den Hurk, A., Simmons, C., O'Neill, S. and McGraw, E., 2015. Wolbachia Reduces the Transmission Potential of Dengue-Infected Aedes aegypti. *PLOS Neglected Tropical Diseases*, 9(6), p.e0003894.

Ye, Y., Woolfit, M., Rancès, E., O'Neill, S. and McGraw, E., 2021. Wolbachia-Associated Bacterial Protection in the Mosquito Aedes aegypti.