Tutorial: vector disease crispr version2 after email guideline

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Vector: Anopheles gambiae Disease: malaria [1]- [10]

Reference:

[1] A. Hammond, *et al*. “A CRISPR-Cas9 gene drive system targeting female reproduction in the malaria mosquito vector Anopheles gambiae” Nature Biotechnology, vol.34, pp.78–83 ,2016.

[2] K. Kistler, et al. “Genome Engineering with CRISPR-Cas9 in the Mosquito Aedes aegypti”. Cell Reports, vol.11, pp.51–60, April 2015

[3] Wang S and Jacobs-Lorena M. “Genetic approaches to interfere with malaria transmission by vector mosquitoes” Trends Biotechnology. Vol31, pp.185–193, March 2013

[4] [G.R. McFarlane](javascript:void(0);), *et al*.” CRISPR-Based Gene Drives for Pest Control” Trends Biotechnology. Vol.36, p130–133, February 2018.

[5] Y. Dong, *et al*. “CRISPR/Cas9 -mediated gene knockout of Anopheles gambiae FREP1 suppresses malaria parasite infection.” PLOS Pathogens, vol.14, p. e1006898, 2018.

[6] B. Benham and J. Health, “Gene Knockout Using New CRISPR Tool Makes Mosquitoes Highly Resistant to Malaria Parasite” Johns Hopkins Bloomberg School of Public Health. unpublished.

[7] P. A. Eckhoff, *et al*. “Impact of mosquito gene drive on malaria elimination in a computational model with explicit spatial and temporal dynamics” PNAS, vol.114, pp. E255-E264; January 2017.

[8] V. M. Gantz, *et al*. “Highly efficient Cas9-mediated gene drive for population modification of the malaria vector mosquito Anopheles stephensi” *PNAS*, vol.112, pp. E6736-E6743, December,2015.

[9] L. [Alphey](https://www.nature.com/articles/nbt.3473#auth-1),” Can CRISPR-Cas9 gene drives curb malaria?” *Nature Biotechnology*, vol.34, pp.149–150, February,2016.

[10] S. Basu, *et al*. “Silencing of end-joining repair for efficient site-specific gene insertion after TALEN/CRISPR mutagenesis in Aedes aegypti” *PNAS*, vol.112, pp. 4038-4043, March 2015.