

Supplementary appendix 1

Mosquito rearing procedures at BioGenus GmbH, Biology Technologie Park, Campus 1 in Germany

The adults are kept in cages (48 x 48 x 39 cm) with netting on the sides and upper part under 12 hours light: 12 hours dark regime at 25°C ± 1°C and 60 (1/0 ± 10 % relative humidity and provided 10 % sucrose solution (Dextropur®) *ad libitum*. An artificial blood feeding system was used twice a week. Cattle blood with anticoagulant (CPD) in a dish was placed on a heating plate with magnetic stirrer. After heating the blood to 40°C, 50 ml was filled into a pig bowel and given into the cages so the mosquitoes are able to suck the blood. A plastic soup tureen filled with tap water is used as an oviposition station. Collected eggs are placed in a plastic container (25 x 37 cm) with five liters of tap water and kept on a heater mat. Food for tropical fish (Vita®) is added once a day, except Sundays. After seven days the pupae are transferred into buckets (10 litres) with an adequate amount of water. The hatched adults are used for testing or for breeding purposes again.

Mosquito rearing procedures at Ifakara Health Institute's Vector Control Product Testing Unit in Tanzania

The adult mosquitoes are kept in net cages (30 x 30 x 30 cm) under 12 h light: 12 h dark cycle at temperatures of 25±7°C and relative humidity between 40–90% with access 10% sterile (autoclaved) sucrose solution. To stimulate egg laying, cow blood is provided through a water-jacketed membrane feeding system. The water bath is set to 38 °C and connected to glass feeders via tubing. In the glass feeder wells, 0.2 mL of bovine blood is added and a Parafilm™ membrane is stretched across the bottom and held in place using rubber bands. Cups of mosquitoes are then placed underneath the feeders, making sure that the bottom of each feeder touches the netting on top of the cup. After feeding, they are provided with 10% sucrose *ad libitum* and 48 h later an egg-plate for oviposition was introduced into the rearing cages. The eggs laid are then flushed into a bowl with water for incubation and subsequent hatching. The resulting larvae are maintained at an average density of 200 per litre, fed ground

Tetramin[®] fish flakes dispersed evenly across the top of the water using a spoon. After 7 to 8 days the pupae are placed into emerging bowls and placed inside netting cages to hatch into adults that are then used for experiments or breeding the next generation.