



Assessment of *Aedes albopictus* mosquito behaviour in response to specific light sources.

Author: Dr. Claudia Damiani

OBJECTIVE OF LIGHT AVOIDANCE TEST

These tests were performed by Biovecblok s.r.l., in the insectary of Camerino University.

MATERIALS

- Light source: mosquito repellent TRILED Baesten light and cold light (control)
- Mosquitoes: *Ae. albopictus*: vector of dengue, yellow fever, chikungunya, zika and dirofilariasis.
- 8 cages (20x20x20cm) equipped with resting site (dark cardboard, 20x20x10cm).
- Large mosquito cage for hosting entire experimental set-up.
- Insectary room set up to maintain 28°C, 85% relative humidity and a 12 hour light/dark cycle mimicking day and night.
- Hemotek membrane feeding system to perform mosquito blood meal.

EXPERIMENTAL DESIGN

- The entire experiment (light source, cages, detection) was settled into an insectary room (*see Materials*) (Fig. 1).
- 4 small cages were placed with a 20cm stepwise increasing distance from the light source.
- A cardboard dividing a cage into a shady area for refuge and a bright zone structures each cage. The shade is generated by placing the cardboard in relation to light source.
- Each cage was equipped with sugar and blood feeding vessels.
- 25 female and 20 male adult *Ae. albopictus* mosquitoes (15 days after emergence) were added to each cage.
- After an adaptation time of 1h to light source, mosquitoes were fed using hemotek membrane feeding system for 4 hours.
- A control experiment was performed as described above, with cold light source.

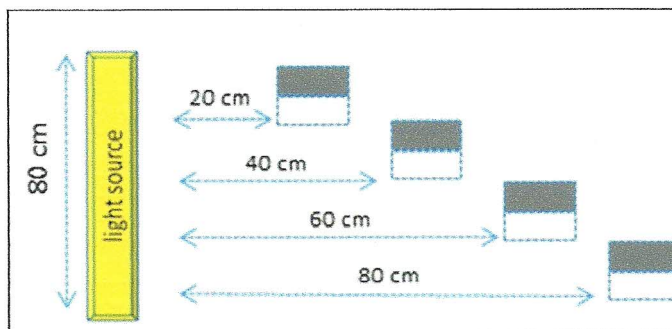


Fig. 1: Light avoidance experiment. Set-up of light source, cages and detection

Biovecblok S.r.l - Via del Bastione 5, 62032 Camerino (MC)



