



Anopheles gambiae Patton (Cellia)

Strain Name: RSP-ST, MRA-698

Place of Origin: isolated from RSP

Colonization date: 1992

Established by: Dr. John Vulule, Dr. Anton Cornel

Deposited by: Dr. Frank Collins, Dr. Hilary Ranson

Genotype: 2La+/, 2Rj +/+, TEP1 s/s, L1014S KDR

Phenotype: monomorphic for c+ (*collarless*);

Karyotype: standard karyotype

Ribosomal DNA form: Savanna

Insecticide Resistance: permethrin

Larval Morphological Traits



Collarless (c+) is caused by a uric acid build-up in the larvae. Expression is often variable but best seen in L4 larvae. RSP-ST is monomorphic for c+.

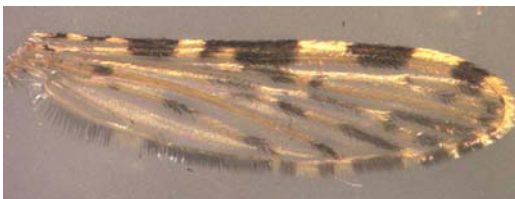


Red stripe-if present, individuals expressing red stripe are female



When reared in a dark pan, larvae with wild-type eye color will melanize when compared to a cohort reared in a white pan.

Adult Morphological Traits



Morphological characteristics of *An. gambiae s.l.* adults.

Authentication Methods used to confirm stock identity

1. Examined immatures for the *collarless* (c+) trait: L4 larvae are monomorphic for c+
2. Examined the color of the larvae when cultured in a black pan: larvae are melanized when compared to a cohort reared in a white pan.
3. Exposed L4 larvae to 1ppm permethrin for 24 hours to confirm resistant status. Keep survivors as stock. Record survival percentage.
4. Examined adults microscopically for morphological characters: all individuals had standard features of *An. gambiae* and wild eye color.
5. Performed molecular *An. gambiae s.l.* identification: *An. gambiae s.s.* and mixed mopti/savanna type.
6. Performed molecular 2La and TEP1 analysis: 100% wild type and susceptible.



References referring to this stock:

Ranson H, Jensen B, Vulule JM, Wang X, Hemingway J, Collins FH (2000) Identification of a point mutation in the voltage-gated sodium channel gene of Kenyan *Anopheles gambiae* associated with resistance to DDT and pyrethroids. *Insect Mol Biol* 9:491-497

Vulule JM et al. (1999) Elevated oxidase and esterase levels associated with permethrin tolerance in *Anopheles gambiae* from Kenyan villages using permethrin-impregnated nets. *Med Vet Entomol* 13:239-244

Vulule JM, Beach RF, Atieli FK, Roberts JM, Mount DL, Mwangi RW (1994) Reduced susceptibility of *Anopheles gambiae* to permethrin associated with the use of permethrin-impregnated bednets and curtains in Kenya. *Med Vet Entomol* 8:71-75