Anopheles gambiae Patton (Cellia)

Strain Name: L3-5, MRA-114

Place of Origin: United States

Colonization date: 1986

Established by: Frank Collins

Deposited by: Mark Benedict

Genotype: TEP1 r/r, 2La – wild type,

Phenotype: encapsulates Plasmodium oocysts, cc (collarless)

Karyotype: undefined

Ribosomal DNA form: Mopti

Insecticide Resistance: none

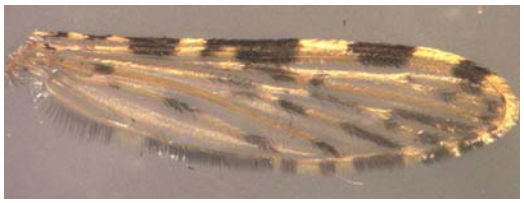
Larval Morphological Traits

Collarless (c+) is caused by a uric acid build-up in the larvae. Expression is often variable but best seen in L4 larvae. L3-5 is cc (no collar).

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 collarless (cc)
2. Examined the color of the larvae when cultured in a black pan: larvae are distinctly melanized when compared to a cohort reared in a white pan.
3. Performed molecular An. gambiae identification; all tested individuals are positive for both *An. gambiae* s.s.and Mopti rDNA form.
4. Performed molecular combined 2La and TEP1 PCR: all tested individuals are wild type and refractory.
5. Examined adults microscopically for morphological characters: all individuals had standard features of *An. gambiae* and wild eye.

6. Cohort of females were fed on *Plasmodium cynomolgi* B infected monkey: Individuals had all or almost all encapsulated oocysts in the midgut. (This not performed as often as other authentications).

References referring to this stock:

Paskewitz SM, Shi L (2005) Bypassing the midgut results in development of *Plasmodium berghei* oocysts in a refractory strain of *Anopheles gambiae* (Diptera: Culicidae). The Journal of Medical Entomology 42:712-715

Collins FH, et al. (1986) Genetic selection of a Plasmodium-refractory strain of the malaria vector *Anopheles gambiae*. Science 234: 607-610

Related Sequences:

TEP1 gene refractory – Pubmed Accession Number XM_318488