Abstract:

Foreign DNA was successfully introduced into the germline of the African mosquito vector of malaria Anopheles gambiae. Stable integration of genes into the germlines of insects had been achieved previously only in Drosophila melanogaster and related species and required the use of the P element transposon. In these experiments with Anopheles gambiae, the plasmid pUChsneo was used, which contains the selectable marker neo gene flanked by P element inverted repeats. Mosquitoes injected with this plasmid were screened for resistance to the neomycin analog G-418. A single event of plasmid insertion was recovered. Integration appears to be stable and, thus far, resistance to G-418 has been expressed for eight generations. The transformation event appears to be independent of P.