

Transgenic malaria mosquitoes created

Scientists at the United Kingdom's Imperial College and the European Molecular Biology Laboratory, Germany, have created the world's first genetically modified malaria mosquito. By inserting an exogenous gene into the species of mosquito that carries malaria, *Anopheles stephensi*, scientists have come a step closer to creating a mosquito that could help stop the spread of this dreaded disease.

Researchers inserted into *A. stephensi* embryos the gene for green fluorescent protein (GFP) using a transposable element derived from *Drosophila hydei*. The element used, called Minos, was chosen because it had previously been shown to mediate insertions in mosquito cultured cells. GFP expression in injected larvae was high, roughly 50 per cent of survivors. However, survival to adulthood averaged 10 per cent. Germline transmission of GFP and precise insertion in mosquito chromosomes were also demonstrated.

A key to the success of this experiment was finding a way to inhibit hardening of the embryos, which makes embryo injections difficult. To prevent hardening, female mosquitoes were allowed to lay eggs in a solution of p-nitrophenol p'-guanidinobenzoate (pNpGB), which inhibits the enzyme phenoloxidase, the first step in the melanization process. *Contact: Dr. Andrea Crisanti, Imperial College of Science, Technology and Medicine, Imperial College Road, London SW7 2AZ, the United Kingdom. Tel: +44 (207) 5945 426; Fax: +44 (207) 5945 439; E-mail: a.dr cristanti@ic.ac.uk. (Website: <http://www.bioresearchonline.com>)*