

## Research project IZS VE 03/10

**Establishment of a laboratory rearing system of two important mosquito vectors of Italy, *Culex pipiens* and *Aedes albopictus***

**Project coordinator: Gioia Capelli**

The main objective of this project is to improve the surveillance system for vector-borne diseases (VDBs) in north-eastern Italy. In general the surveillance for VDBs is based on passive surveillance (human and veterinary cases detection) and active surveillance which include use of sentinel animals, serological and entomological surveys. This project deal with the entomological part of the surveillance system and proposes the rearing of two important vector species in laboratory conditions.

The goal of organized insect rearing is to provide reliable, affordable sources of high-quality pathogen-free insects for many important purposes which include:

- test the sensitivity and specificity of biomolecular techniques designed to search viruses in animal samples but rarely in pooled mosquitoes;
- perform ecological study of the vector competence/host preferences;
- mosquitoes can be marked, and released to understand their orientation, dispersal, and migration;
- test the efficacy of chemical insecticides or of biological control.

This research is focused on colonies set up and goal number 1.