HAZARD EVALUATION OF SOME NOVEL PESTICIDES AGAINST NON-TARGET ORGANISMS

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SUMMARY AND CONCLUSIONS

The problems and risks of intensive and misuse of pesticides need to offer a suitable system for hazard assessment of such chemicals under local conditions. Since these systems widely used now as a basic requirement for take the decisions regarding to prevent adverse effects against health and environment. So, the aim of the present study is to propose a hazard evaluation model which can be used as a tool for management handling and use of pesticides. To get the required data for establishing the model, serial of experiments were designed and carried out for two insecticides, i.e. chlorpyrifos as a chemical conventional insecticide and abamectin as a novel insecticide. The experiments included the following:

- Determination of toxicity data (LD_{50}, LOEL and NOEL) against rats and test biochemical and histopathological effects of the two tested insecticides against rats.

- Assessment the phytotoxic effects of the two tested pesticides against *Vicia faba* .

- Genotoxicity assessment of the two tested insecticides against insect model (*Drosophilla sp*), mammalian model, (Experimental rats) and plant model (*allium cepa*).

- Toxicity measurement of the two tested insecticides against non-target organisms honey bees (Adult *Apis melifra*) and hymenopteran egg parasitoid (*Trichogramma sp*).

- Studying the environmental fate of the two tested insecticides on (plants leaves surfaces) and in (water and bacteria *Pseudomonas fluorescence* liquid media).

Approval Sheet

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