

New insecticides

A search of over four million chemical compounds by IVCC agrochemical partners identified nine classes of novel active chemical ingredient that will form the basis of new resistance-busting insecticides.

Use

Only four classes of insecticide are currently available for public health use. Of these, only one, the pyrethroids, is suitable for use on bednets. Insecticide resistance is reported to all four classes of insecticide and this is beginning to have operational impact on indoor residual spray programs and insecticide treated bednets. Developing three new classes of insecticide, each with a novel mode of action, will ensure that future insecticides will be able to successfully overcome insecticide resistance and play a vital role in the eradication of malaria.

Benefits over existing alternatives

- Safer for humans and the environment
- More than one insecticide will be available for bednets
- Totally new modes of action

Features

- Broad spectrum mosquito control
- Three totally new different modes of action will break the cycle of insecticide resistance
- Safe in use both for human safety and the environment
- IVCC has access to chemical libraries worth over \$30 million dollars

Time to develop

The search for new insecticides began in Q2 2005 with the appointment of an Expert Scientific Advisory Committee (ESAC), whose first task was to create a comprehensive target product profile for new active ingredients, detailing public health requirements, toxicology and cost.

Industrial agrochemical companies were briefed in Q4 of 2005 and each company began to research their enormous libraries of over 4 million chemical compounds. From these, after extensive further research and input from the IVCC ESAC, 9 novel chemical classes have been identified and will move into candidate selection stage by Q4 2014.

By Q4 2015, 3 active ingredients will have been selected and moved into the final development stage of rigorous testing, which may take up to 7 years depending on the time taken to obtain regulatory approval. IVCC is working together with regulatory authorities to find ways to make the approval process shorter and more efficient.



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