

## **FLAVOCIDE™ SHOWS ACTIVITY AGAINST BOTH INSECTICIDE SUSCEPTIBLE AND RESISTANT *Aedes aegypti* MOSQUITO LARVAE AND ADULTS IN PILOT STUDY**

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- **Data from a pilot study support a different Mode of Action for flavesone than for Synthetic Pyrethroid (SP) and formamidine (Amitraz) pest-control products**
- **Flavesone showed more rapid activity against SP-susceptible and resistant larvae than commercial SP and organophosphate (OP) products**
- **Next stage of testing to commence**

Bio-Gene Technology Limited (ASX: BGT, “Bio-Gene” or “the Company”), an agtech development company enabling the next generation of novel insecticides to address insecticide resistance, is pleased to announce summary results of initial pilot studies undertaken to demonstrate flavesone’s activity against insecticide-resistant and susceptible larvae and adult *Aedes aegypti* mosquitoes and provide an indication into the Mode of Action.

Led by Professor Catherine Hill and her team at Purdue University, Indiana, U.S.A., the studies showed that Flavocide™ EW (oil in water emulsion), containing flavesone as the active ingredient exhibited activity against both SP-susceptible and resistant larvae in contact assays, where it outperformed several commercial products in speed of kill.

“Our data suggest flavesone is more rapidly toxic to mosquitos than commercial products, at the test doses used in the study,” Professor Catherine Hill said. “While we need to undertake more extensive dose range finding studies, the observed rapid activity was unexpected. It could provide a significant point of difference and create a number of opportunities for ongoing development of flavesone either alone or in combination with other insecticides”.

Prof. Hill also reported on her team’s testing to demonstrate potential Mode of Action. They showed that flavesone caused mortality of SP-resistant insects, indicating that the product does not act via the voltage-gated sodium channel (VGSC), the molecular target of SP insecticides.

“These results indicate that flavesone works differently than SPs which are used in commercial products for mosquito control but are associated with resistance,” Professor Hill noted. “With limited options for alternative mosquito management molecules, there may be potential for flavesone as part of an integrated resistance management strategy, which is vital for the long-term control of mosquitoes globally”.

“The studies performed and results observed are part of a pilot study to assess the value of flavesone in controlling mosquitos in various applications,” said Bio-Gene’s CEO Richard Jagger. “The testing achieved the goals we were aiming for and allows us to refine a range of second round testing to further identify where this molecule may be of commercial significance in the field of mosquito control.”

According to the World Health Organisation, mosquito bites result in the deaths of more than one million humans per year, acting as vectors for many serious diseases.

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**About Bio-Gene Technology Ltd**

Bio-Gene is an Australian AgTech development company enabling the next generation of novel insecticides to address the global problems of insecticide resistance and toxicity. Its novel platform technology is based on a naturally occurring class of chemicals known as beta-triketones.

Beta-triketone compounds have demonstrated insecticidal activity (e.g. kill or knock down insects) via a novel mode of action in testing performed to date. This platform may provide multiple potential new solutions for insecticide manufacturers in applications across animal health and crop protection, as well as in public health, and in consumer applications.

The Company's aim is to develop and commercialise a broad portfolio of targeted insect control and management solutions.

**About Professor Catherine Hill and Purdue University**

Catherine Hill is a Professor of Entomology at Purdue University in Indiana, U.S.A. where she leads an internationally recognised research program focused on the control of insects and ticks of medical and veterinary importance. The discovery and development of new, human-safe insecticides is the primary goal of her research program.

Prof. Hill and her team use bioinformatic, molecular and pharmacological approaches to identify insect-selective chemical leads with potential for development as new mode-of-action insecticides. Prof. Hill has strong interests in research entrepreneurship and commercialisation.