SYNERGY STUDIES WITH FLAVOCIDE™ AND QCIDE™ OFFER SIGNIFICANT NEW COMMERCIAL OPPORTUNITIES FOR USE WITH OTHER INSECTICIDES

- **Research program demonstrates positive synergistic ability for both Bio-Gene molecules, Flavocide™ and Qcide™, when used in combination with other commercially important insecticides**
- **Positive synergy results significantly expand the possible commercial opportunities for Bio-Gene in the US$31.1 billion global insecticide market[1] by providing industry benefits including:**
  - **lower dosage requirements leading to reduced cost application and improved environmental safety**
  - **extended use of commercial partner post-patent products with added benefit of increased efficacy against resistant pests**
- **Early stage results have already drawn interest from global companies with the recent signing of a Material Transfer Agreement**
- **Program studies conducted by globally recognised research organisations: Purdue University; University of Florida; i2L Research; and cesar Australia**
- **Tests demonstrate synergy with particular commercially important molecules from other chemical groups against certain target insect species, including resistant strains**
- **Reinforces value of Bio-Gene products' unique Mode of Action to provide more effective control and address resistance of pests to several insecticides**

Bio-Gene Technology Limited (ASX: BGT, **Bio-Gene** or the **Company**), an agtech development company enabling the next generation of novel insecticides, announces the culmination of independent research that confirms significant synergy results for both Flavocide and Qcide when used in combination with other commercially important insecticides.

Positive research results demonstrating synergy in combination can provide substantial commercial value to the US$31.1 billion global insecticide industry, including reduced application rates, lower-cost control, increased ability to tackle resistance, and extending the use of existing products within and beyond their patent life. Results from earlier stages in the research program have already attracted interest from global companies with Bio-Gene signing a new Material Transfer Agreement to assess commercial synergy opportunities.

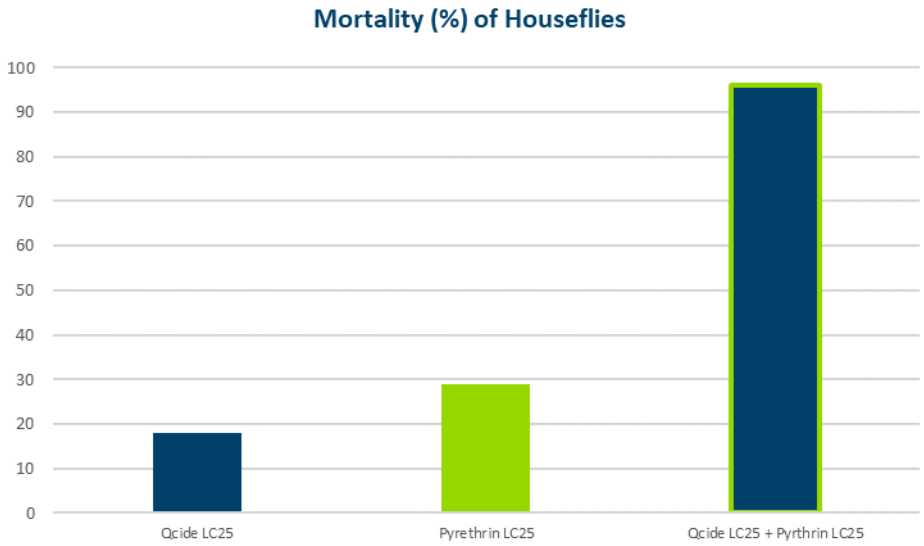
Tests were undertaken by globally recognised research organisations Purdue University; University of Florida; i2L Research; and cesar Australia. The data has been used to support patent applications for use of Bio-Gene products in combination.

The tests show statistically valid evidence that synergy exists with low dose Flavocide and Qcide as follows:

- **Flavocide: in combination with other commercially important molecules** including pyrethrins, pyrethroids, diamides, carbamates and organophosphates against a number of insect pest species including mosquitos, houseflies, aphids and moths, including both susceptible and resistant strains.[2]
- **Qcide: in combination with other commercially important molecules** against different target species including pyrethrins and pyrethroids against insect pest species including mosquitos and houseflies, including both susceptible and resistant strains.[3]

Synergy occurs when the effect of active ingredients in combination produces greater than the additive efficacy of those active ingredients when used alone. For example, the efficacy against houseflies was synergistic when combining Qcide with pyrethrin resulting in more than three times the efficacy of when compounds were used

alone (see chart below).



Commenting on the test data, Bio-Gene CEO, Richard Jagger, said: *"These positive synergy results provide significant additional commercial opportunities for Bio-Gene in the US$31.1 billion global market. They create lasting value for Bio-Gene and our partners on several levels and improve the potential of insect control in public health applications, food production efficiency and addressing pest resistance to existing products, a major global concern.*

"First, it broadens the scope of activity of commercial products to provide more effective pest control solutions that have less impact on the environment. For example, the synergy we have demonstrated includes that with pyrethroids and pyrethrins, a chemical group worth US$3 billion annually.

"Second, by combining one of our products with a molecule that is soon to come off patent and unexpectedly, though advantageously demonstrating synergy, we have created and protected new IP for that original molecule, which incrementally adds value to the company holding patents over that original chemistry, and to Bio-Gene.

"Finally, the data supports our recent patent applications (combinations of products) which provides further protection and value for our technology. It increases the protection we have around our molecules, and their inherent value to our commercial partners.

"The exciting potential of these results will be of great value to our commercial partners. We have already seen this with the signing of a new Material Transfer Agreement with a global company based on test results generated earlier in the program."

Bio-Gene Executive Director of Research and Development, Peter May commented: *"Synergy is arguably the holy grail in chemistry. Adding two products together and seeing something beyond additive effects is unexpected and very special. Bio-Gene's new mode of action makes synergistic combinations with certain existing commercial products possible. A mode of action is the way a chemical works in the body of the insect to control it. Modes of action target different locations within the insect and effect muscles, nerves, cuticles, and cell functions. New modes of action are very rare, and we have developed one with proven efficacy.*

"We have shown that very low levels of a Bio-Gene molecule combined with a low level of certain other commercially important product can achieve excellent synergy results. In simple terms, we made 1 plus 1 equal 3."

Business update presentation

Richard Jagger (CEO and Managing Director) and Peter May (Executive Director Research & Development) will present further detail on the Synergy studies along with a business and quarterly progress presentation on **Wednesday 3 May** at **11:00am (AEDT)**.

To participate, please register at:
https://us02web.zoom.us/webinar/register/WN_pxcBhHtfRLaxw7rS4rn-Dw

After registering, you will receive a confirmation email containing information about joining the webinar.

Approved for release by the Board of Directors.

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About Bio-Gene Technology Ltd

Bio-Gene is an Australian agtech company enabling the next generation of novel insecticides. Bio-Gene's 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 crop protection and storage, public health, animal health and consumer applications. The Company's aim is to develop and commercialise a broad portfolio of targeted insect control and management solutions.

Sources

[1]*US EPA 2017, WHO 2017, Zoetis & Provue Market Research, Markets & Markets*
[2]In spray/topical applications: with pyrethrins against houseflies (*Musca domestica*); with pyrethroid Permethrin against houseflies (*M. domestica*) and mosquitoes (*Aedes aegypti*); with pyrethroid alpha-Cypermethrin against aphids (*Myzus persicae*); with diamide Chlorantraniliprole against resistant diamondback moth (*Plutella xylostella*); with carbamate Pirimicarb against aphids (*M. persicae*); with organophosphate Dimethoate against aphids (*M. persicae*).
[3]In spray/topical applications: with pyrethrins against houseflies (*M. domestica*); with pyrethroid Permethrin against houseflies (*M. domestica*) and mosquitoes (*A. aegypti*) including resistant strains.