# Bio-Gene Shareholder Update

The attached Shareholder Update is provided pursuant to Listing Rule 3.17.1 which requires a copy of a document sent to securityholders generally to be released to ASX. The content of the Newsletter is substantially the same as part of the information contained in the Investor Newsletter released to ASX on 26 May 2020.

The Update will be sent to Shareholders with the Offer Booklet for the Share Purchase Plan announced on 26 May 2020, which is anticipated to be mailed out on 27 May 2020. A copy of the Offer Booklet will be released to ASX as an announcement to confirm dispatch.

*Approved for release by the Chairman of the Board.*

**- ENDS -**

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**About Bio-Gene Technology Limited**

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 Crop Protection, Grain Storage, Public Health and Consumer Products. The Company's aim is to develop and commercialise a broad portfolio of targeted insect control and pest management solutions.

# SHAREHOLDER UPDATE | MAY 2020

BIO-GENE TECHNOLOGY LTD

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## *FROM RICHARD JAGGER, CEO & MD*

Dear fellow shareholders,

I would like to take this opportunity to provide an update on Bio-Gene's recent achievements; all of which I believe, have combined to increase the Company's value proposition, for you the shareholders.

We recently announced that we have successfully raised $2.4 million via a placement to sophisticated and professional investors. We are delighted with the support from both current and new investors. We also announced the launch of a Share Purchase Plan to raise up to a further $1.5 million at the same price of $0.155.

So far the Company has achieved several important milestones and made notable progress on its commercialisation strategy.

In April 2020, Bio-Gene announced a partnership with Clarke Mosquito Control (Clarke), to develop Flavocide™ and Qcide™, for use in public health mosquito control in North, South and Central America.

This represents an important milestone, and the second evaluation partnership for Bio-Gene, following the stored grain pest control research program that we announced in 2019 with BASF, GRDC and Queensland DAF. Having two partnerships, one in grain storage and one in public health, represents important validation of the broad potential of Bio-Gene's proprietary technology as a next generation insecticide to address the global problem of insecticide resistance and toxicity.

### Public Health

On 23 April 2020, Bio-Gene was excited to announce that it had signed a partnership with Clarke. Based in the U.S., Clarke is the largest vertically integrated company serving the public health mosquito control market. Our partnership with Clarke follows positive results from their internal testing of Flavocide and Qcide

This agreement with Clarke has the opportunity to expand into other markets and is very valuable for our discussions with other stakeholders including for example NGOs and philanthropic organisations, to further develop commercial opportunities in the public health space.

This strategy is further supported by our results from work undertaken by Purdue University (internationally recognised for their work in vector control) and announced in December 2019, demonstrating Flavocide's effectiveness to control three major mosquito species – *Anopheles gambie, Aedes aegypti, and Culex pipiens* resistant to Synthetic Pyrethroids, the most common class of chemistry used to control mosquitoes. These species are responsible for the spread of diseases such as Malaria, Dengue Fever, Zika Virus, Yellow Fever, Chikungunya, West Nile Virus, Eastern Equine Encephalitis and Ross River Fever.

### Stored Grain

Bio-Gene is currently undertaking a four-way collaborative research program relating to stored grain pest control. The four-way partnership includes Bio-Gene; BASF, the world's leading chemical company; GRDC, Australia's national grains research, development, and extension investment body; and Queensland DAF, recognised experts in the field of stored grain pests.

The research program, which began in January 2020, is assessing Bio-Gene's technology in combination with other chemical groups for control of the range of key stored grain pests. The program has just completed Stage 1, which identified the optimum combination of Flavocide with existing compounds for control of the most common, and highly resistant stored grain pest, the Lesser grain borer.

The results of this stage, guiding treatment modifications for evaluation on other major pests of stored grain, has the aim of developing one product combination that can control the most significant five pest species. Stage 2 recently commenced and is anticipated to take approximately three months to complete. Stage 3, comprising of field trials, will then follow to determine the residual efficacy of the target product combination.

In December 2019, Bio-Gene was pleased to announce results from its stored grain trial that confirmed Flavocide successfully controlled the Lesser grain borer over a nine-month period, which is considered a key industry standard for any new grain protectant to enter the market.

In March 2020, Bio-Gene announced final results from this trial, showing Flavocide continued to control this key stored grain pest over 13 months. The residual efficacy over 13-months is highly encouraging because it further strengthens the commercial viability of Bio-Gene's technology in stored grain.

The largest natural threat to the safe storage and distribution of grains is insect infestation. There is currently no single chemistry that controls all the major pests. Furthermore, the incidence of resistance to existing chemistries is rising in Australia, and around the world. Bio-Gene's nature-identical molecule Flavocide has the potential to create formulations that will enable control of the full range of pests including those resistant to other classes of chemistry.

**Pathway to Commercialisation**

Recently Bio-Gene signed an additional material transfer agreement (MTA) with an international a European-based organisation focused on consumer applications in home and garden. There are currently eight MTAs in place across all four of our target markets: Crop Protection, Grain Storage, Public Health and Consumer Products which provides Bio-Gene with a number of opportunities to enter into further commercial partnerships . Furthermore, we have several other discussions underway with other potential commercial partners.

Under these MTAs, companies have received samples of Flavocide and Qcide and are undertaking their own testing. It is increasingly apparent that these potential partners have significant experience and expertise in commercialising technologies, especially in relation to the regulatory process and manufacturing, that may enable Bio-Gene to enter into collaborative agreements to more cost-effectively commercialise the company's technology and products.

**Manufacturing**

The company has continued the scale-up program of Flavocide manufacture, under a development agreement with Boron Molecular Pty Ltd. Phase One of the project has been completed, which has delivered an improved standard operating procedure for synthesis of the technical grade material with improvements in yield and purity. The next phase will involve production on a larger scale with dedicated production equipment, which also aims to produce batch analysis data to support product registration, as well as representative commercial grade material to use in future toxicological and product chemistry testing.

Our Qcide manufacturing program has also seen significant developments, and with the guidance of James Cook University engineering staff, we are improving the oil production and extraction processes. Another JCU project aims to deliver cloned trees with optimised oil and active ingredient levels within the leaves of the trees to maximise Qcide oil production from plantation areas.

I would like to take this opportunity to thank you, the shareholders for your ongoing support of Bio-Gene and I look forward to updating you with further progress in the coming months.

Sincerely,

**Richard Jagger**
Chief Executive Officer
& Managing Director