

BIO-GENE SEPTEMBER 2020 QUARTERLY UPDATE

- **Strong progress made on commercialisation strategy**
- **Successful completion of Stage 2 of the Stored Grain product development program with BASF and GRDC – Key final stage field trial to begin in November 2020**
- **Stage 2 of the product development program with Clarke Mosquito now underway**
- **MTA testing continues to advance with a number of global players in new key market segments, leading to potential additional partnering agreements**
- **Further efficiencies identified for the manufacturing processes of both Flavocide™ and Qcide™**
- **Additional toxicology studies underway and due for completion before year-end**
- **Leading small cap broker PAC Partners engaged to provide research and advisory services**
- **Strong cash position as at 30 September 2020 of \$5.1 million**

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, today announced an update on its activities for the quarter ending 30 September 2020, and to date.

Bio-Gene Chief Executive Officer and Managing Director, Richard Jagger said: "The primary focus during the quarter was aligning our internal and external research projects to further drive us towards commercialisation. The successful completion of the second stage of our leading product development opportunity in stored grain in collaboration with BASF /GRDC was a highlight, and provides great confidence as we take the lead product candidates to the field for residual efficacy testing which will begin in November. Positive Stage 3 data will place the Company in a very strong position to conclude a commercial agreement with our collaboration partners.

"Separately, Stage 2 of the product development program with Clarke Mosquito also began during the quarter, with the initial focus on identifying the optimal platform for new formulations containing both Flavocide and Qcide. Stage 2 is scheduled for completion over the next 4-5 months. Similar to our leading stored grain opportunity, work following completion of Stage 2 will focus on taking key leading product candidates to field trials. The challenges associated with the increasing incidence of mosquito-borne diseases globally, compounded by increasing resistance to insecticides, has been well documented. Furthermore, in addition to the spread of Malaria, Zika virus, and Dengue fever, recent outbreaks of Eastern Equine Encephalitis in the United States are causing concern amongst communities. Whilst relatively rare, the mortality rates are very high for this disease in humans. Clarke is a key service provider for governments and councils within the Americas for the management of disease outbreaks transmitted by mosquitoes and other insects. The global insecticide market for Public Health is currently in excess of \$4 billion per annum.

"Whilst continuing to support our leading opportunities in stored grain and mosquito control, we are also working closely with our other potential partners who are evaluating Bio-Gene's products under MTAs. We are particularly encouraged by progress made in new potential market segments as well as new geographies for existing market segments. We remain confident that this work will lead to additional formal partner agreements which will be pursued over the coming months. To help support that process we continue to invest in further studies focused on safety, efficacy and specifics of the mode of action to continue to advance our data package in preparation for our registration application."

Stored Grain

As previously reported, 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 Department of Agriculture and Fisheries (DAF), recognised experts in the field of stored grain pests. The research program commenced in January 2020 and is assessing Bio-Gene's technology in combination with other chemical groups for control of the full range of key stored grain pests.

In September 2020, Bio-Gene announced that the program completed Stage 2, which identified product combinations of Flavocide with existing compounds for control of all key stored grain pests, being the Lesser Grain Borer, Flour Beetle, Saw-toothed Beetle, Flat Grain Beetle and Rice Weevil. Stage 2 studies were conducted in the laboratory using wheat grain stored under controlled conditions and involved two combination rates aimed at reducing the quantity of chemical required to provide control of the full range of resistant strains of the major stored grain pests. The results with both combination products showed high levels of control of first-generation (offspring) populations of all target species. These positive results strongly support the commercial viability of this technology.

Stage 3 field testing is planned to begin in November, due to the seasonal availability of the grains, and extend over a nine-month period, with periodic assessments at 0, 3, 6 and 9 months after treatment. Following the results announced on 26 March 2020 that Flavocide was able to control key stored grain pest, the Lesser Grain Borer, for over 13 months (both in field and laboratory work), the Company is optimistic about the outcome for Stage 3 testing. We will continue discussions about future commercial arrangements whilst the Stage 3 testing is underway.

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. Market Reports estimate the global use of insecticides used to control pests in stored grain was around US\$550 million in 2017, and is expected to grow very quickly to over US\$900 million by 2026*. Globally over 2,765 million tonnes of grain are produced each year**, and significantly increasing quantities are destined to spend time in storage prior to use as growers and grain marketers aim to achieve the best prices for grain commodities, which can be affected by the time of selling. While Australia may only represent around 3% of global grain production, and 7% of global export, we have significant world-wide expertise in researching the issues of resistance to insecticides that effect stored grain pests, and our Australian-based program is an ideal platform for developing globally applicable products. We plan to use our studies here in Australia (as well as in other significant markets) to expand our reach into the global markets.

Public Health

As announced on 23 April 2020, Bio-Gene signed a partnership with Clarke to develop both Flavocide and Qcide for use in public health mosquito control in North, South and Central America. Clarke, which is based in the US, is the largest vertically integrated company serving the public health mosquito control market; and the partnership follows positive results from their internal findings of testing Flavocide and Qcide.

This study was due to commence in June 2020, however due to the necessity to reconfigure their laboratory and testing protocols due to the COVID pandemic, we experienced some delay in commencing the studies. Stage 2 began in August and is progressing well. The first step in this study involves evaluating different solvents, or potential carriers of our molecules, to understand which options will offer the highest potential for efficacy and commercial opportunity for mosquito control. Our ongoing project review meetings with Clarke are very positive and will prepare us for the second step which will involve development of formulation prototypes.

This program is scheduled to take around 4-5 months, meaning we should be able to provide some updates early in the new year. Similar to the evaluation agreement we are running for stored grain pests, in the event of positive Stage 2 testing, we expect to move to Stage 3 where product combinations would be tested in the field, representing a precursor to potential commercial registration and release.

In 2017, the World Health Organisation estimated over 50% of the world's population is at risk to vector borne diseases, and the worldwide insecticide market in public health to be around \$US4 billion per year. The Innovative Vector Control Consortium (IVCC) notes that "mosquito resistance to current insecticides is threatening the huge gains made so far in reducing the deaths from disease spread by mosquitoes and therefore we desperately need effective chemistry with modes of action new to public health to combat these resistant mosquitoes, and enable rotation with other products".

Eco-Toxicity

Previously we had announced results relating to a number of eco tox studies completed on Flavocide. Testing is now underway on a number of additional species which will help us develop the safety profile of our products and determine the next steps required in our registration enabling studies. This is an important part of the commercialisation process as registration of our active ingredients is required before any sales. Our strategy is designed to identify the minimum testing required for our products to obtain registration, which is based on the results of these early findings. We expect to be able to announce results on these studies soon.

Intellectual Property

We have recently entered into the national phase on two of our patent applications. We have also requested an accelerated examination in the US. Additional patents would provide increased protection to our technology and support the investment we are making to develop a valuable, commercial outcome.

Manufacturing

We have been focused on the continued improvement of Flavocide production. In particular identifying additional streamlining and cost saving opportunities to lower manufacturing costs. This is to assist in our commercial discussions with companies reviewing production costs as part of their assessments before progressing to partnership agreements. A number of improvements have been made and identified involving the recycling of intermediate and waste products, creating more efficient use of raw materials, and a cleaner, less impactful manufacturing process.

Our Qcide manufacturing program has also been advanced ahead of a scheduled harvest in November, which will test a number of enhancements to the oil extraction process. The harvest will occur under the guidance of James Cook University which manages the measurement and analysis of data generated during the harvest process. We are expecting the enhancements to deliver a higher percentage of extraction of total oil content, at a faster rate.

Pathway to Commercialisation

In addition to the companies already engaged with Bio-Gene via MTAs, we are in discussions with a number of additional entities interested in testing our products for different applications. We are increasingly able to assist with the protocol design of these studies, based on our ever-increasing understanding of the technology.

We hope to be able to announce some results of the testing under a number of these MTAs towards the end of this calendar year.

COVID-19

As mentioned previously, COVID-19 has had no significant impact on the Company's business processes or commercialisation strategy, other than delays experienced by some of the research laboratories testing our

products. These delays are a result of careful evaluation and realignment of the procedures and operating protocols of each lab. Each of these organisations are now comfortable they can carry out agreed testing in a way that ensures the safety of their people, and the integrity of the results.

PAC Partners

Bio-Gene recently engaged PAC Partners to assist with corporate advisory services and independent analyst research. PAC Partners focuses on leading emerging and mid-cap companies with corporate finance clients including some of Australia's highest potential growth companies. PAC Partners has specialist research capability, particularly in the agriculture sector and has received many awards for outstanding research in the space. Bio-Gene is looking forward to working with PAC Partners as it moves towards commercialisation of its leading products Flavocide and Qcide.

Strategy and Communications advisor

The company is also pleased to advise that Robert Reis has been appointed an advisor to the company, specifically to focus on overall company strategy as well as our communications program. Robert has extensive experience in corporate strategy development, M&A, and general management and worked with Nufarm for nearly 25 years, most recently as Group Executive, Corporate Strategy & External Affairs. He now runs a successful consulting firm supporting many significant companies in Australia and around the world.

Cash Position

As at 30 September 2020, Bio-Gene held \$5.1 million in cash, which based on current plans, provides the Company with sufficient cash to operate well beyond 12 months.

Approved for release by the Chairman of the Board.

- ENDS -

For further information, please contact:

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About Bio-Gene Technology Limited

Bio-Gene is an Australian agtech company enabling the next generation of novel insecticides to address the global problems of insecticide resistance and toxicity. 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, consumer applications and animal health. The Company's aim is to develop and commercialise a broad portfolio of targeted insect control and management solutions.

Flavocide™ and Qcide™ are trademarks of Bio-Gene Technology Limited.

* <https://www.researchandmarkets.com/reports/4744816/grain-protectants-global-market-outlook-2017>

** <http://www.fao.org/worldfoodsituation/csdb/en/>

Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity

Bio-Gene Technology Limited

ABN

32 071 735 950

Quarter ended ("current quarter")

30 September 2020

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	40	40
1.2 Payments for		
(a) research and development	(258)	(258)
(b) commercialisation expenses	(67)	(67)
(c) management administration expenses	(48)	(48)
(d) directors' expenses	(46)	(46)
(e) professional services	(24)	(24)
(f) intellectual property	(60)	(60)
(g) administration and corporate costs (see note 6)	(23)	(23)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	13	13
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	38	38
1.8 Other (provide details if material)	-	-
1.9 Net cash from / (used in) operating activities	(435)	(435)

2.	Cash flows from investing activities		
2.1	Payments to acquire or for:		
	(a) entities		
	(b) businesses		
	(c) property, plant and equipment		
	(d) investments		
	(e) intellectual property		
	(f) other non-current assets		
2.2	Proceeds from disposal of:		
	(a) entities		
	(b) businesses		
	(c) property, plant and equipment		
	(d) investments		
	(e) intellectual property		
	(f) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other (provide details if material)		
2.6	Net cash from / (used in) investing activities	0	0

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(21)	(21)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings (lease)	(5)	(5)
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	(26)	(26)

Quarterly cash flow report for entities subject to Listing Rule 4.7B

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	5,522	5,522
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(435)	(435)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(26)	(26)
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	5,061	5,061

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	10	32
5.2	Call deposits	151	190
5.3	Bank overdrafts	-	-
5.4	Other (Term Deposits)	4,900	5,300
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	5,061	5,522

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	217
6.2	Aggregate amount of payments to related parties and their associates included in item 2	N/A
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		

Note 6.1: Director's fees paid to Directors or their related entities.

Quarterly cash flow report for entities subject to Listing Rule 4.7B

7. Financing facilities	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities	N/A	N/A
7.2 Credit standby arrangements	N/A	N/A
7.3 Other (please specify)	N/A	N/A
7.4 Total financing facilities	N/A	N/A
7.5 Unused financing facilities available at quarter end		N/A
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.	

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	(435)
8.2 Cash and cash equivalents at quarter end (item 4.6)	5,061
8.3 Unused finance facilities available at quarter end (item 7.5)	-
8.4 Total available funding (item 8.2 + item 8.3)	5,061
8.5 Estimated quarters of funding available (item 8.4 divided by item 8.1)	12
<i>Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.</i>	
8.6 If item 8.5 is less than 2 quarters, please provide answers to the following questions:	
8.6.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer:	
8.6.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer:	
8.6.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
Answer:	
<i>Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.</i>	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 26 October 2020

Authorised by: Chairman of the Board
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.
6. Net movements in GST are included in this item.
7. Prior Quarter Corrections. Immaterial minor errors and reallocations of expenses from previous quarter reports are corrected on a year to date basis. Movements disclosed for the current quarter have been correctly calculated.