

## BIO-GENE DECEMBER 2017 QUARTERLY UPDATE

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- **Completes \$7.1m IPO to list on ASX**
- **Positive initial Flavocide™ efficacy against red-legged earth mite**
- **Positive safety results from seven-day toxicology study**
- **Mr Doug Rathbone appointed as advisor**
- **Extends Research Collaborations with CSIRO and Queensland Department of Agriculture and Fisheries (QDAF)**
- **Outlines 2018 goals and objectives**
- **Mr. Richard Jagger assumes the role of Chief Executive Officer**

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 provide an update on its activities during the quarter ended 31 December 2017.

Bio-Gene listed on the Australian Securities Exchange (ASX) on 29 November 2017 after raising \$7.1 million in its Initial Public Offering (IPO). The Company issued 35.5 million shares at a price of \$0.20 per share as part of its IPO, giving it a market capitalisation of \$25.3 million upon listing.

Bio-Gene will also issue one loyalty option for every five shares held to eligible shareholders at a record date expected to be 7 March 2018. It is intended that the options will be quoted on the ASX with an exercise price of \$0.20 and an expiry date in November/December 2018.

The global agricultural insecticide market is valued at more than US\$16 billion annually, however insecticide resistance is a growing problem. According to research conducted in 2015, almost 600 insect types (including pests such as ticks and mites) are resistant to more than one insecticide class.

Bio-Gene’s novel platform technology is based on naturally occurring beta-triketones, a type of chemistry that may offer new solutions for insect management control in animal health and crop protection as well as in public health applications.

The Company has two products, Flavocide™ and Qcide™, which data has shown to be highly effective for insect control management. These are potentially suitable for commercialisation into multiple targeted insecticides.

Bio-Gene plans to use funds from its IPO to progress the commercialisation of Flavocide™ and Qcide™, including securing additional collaboration partners, expanding product evaluations, filing patent applications and generating data needed to prepare regulatory submissions required to take the products to market.

### **Red-legged earth mite study results**

In December, Bio-Gene announced positive results from a study conducted to examine the efficacy of Flavocide™ against the red-legged earth mite (*Halotydeus destructor*).

The aim of the study was to assess the efficacy of flavesone (the active ingredient in Flavocide™, one of Bio-Gene’s lead insecticide products) against susceptible and insecticide resistant populations, as well as comparing these results to the efficacy of conventional insecticides bifenthrin and chlorpyrifos.

The study demonstrated that flavesone is effective against red-legged earth mite including field-collected populations with resistance to both pyrethroids (bifenthrin) and organophosphates (chlorpyrifos), and therefore that flavesone has a different mode of action to these insecticides. This is the fourth resistant insect population where Flavocide™ has shown activity indicating its potential to address the increasing problem of insecticide resistance.

The study was undertaken on behalf of Bio-Gene by independent research organisation cesar Pty Ltd (“cesar”). cesar will be conducting the next phase of testing on red-legged earth mites for Bio-Gene, which will see Flavocide™ trialled under semi-field conditions.

cesar is also performing initial efficacy testing on several other major crop pests for Bio-Gene over the coming months.

### **Toxicology studies**

Bio-Gene successfully completed initial toxicology studies in acute and seven-day repeated dose testing of flavesone with positive results demonstrating a favourable safety profile. This will now enable the commencement of longer term, 28-day oral and dermal toxicity studies with an international regulatory accredited toxicology testing organisation.

### **Research agreements**

During the quarter, Bio-Gene announced the extension of a research collaboration agreement with CSIRO to develop improved manufacturing systems for Flavocide™ at a lower cost and higher yield.

CSIRO and Bio-Gene have previously undertaken an initial pilot study where CSIRO was able to develop an improved production system for Flavocide™, significantly reducing estimated cost of production as well as increasing production yield.

Under the agreement CSIRO will continue to evaluate alternative manufacturing processes as well as refine processes developed in the pilot study. The initial results are expected in the second half of 2018.

Bio-Gene also extended a research collaboration with Queensland Department of Agriculture and Fisheries (QDAF) to assess the effectiveness of Flavocide™ against a range of grain storage pests, including various insecticide resistant strains in both laboratory and field evaluations.

QDAF and Bio-Gene have previously undertaken a pilot study where Flavocide™ was shown to have extremely promising activity against major grain storage pest *Rhyzopertha dominica*, better known as lesser grain borer, including against insecticide resistant strains.

Under the agreement QDAF will further evaluate the activity of Flavocide™ against an expanded range of susceptible and resistant strains of grain storage pests under laboratory and field storage conditions, with initial results expected in the near future.

### **Appointments**

Mr. Doug Rathbone was appointed as an advisor to the Bio-Gene Board and management team. Mr Rathbone’s advisory role will have a focus on product development and industry partnering.

Mr. Rathbone is the former Managing Director and CEO of Nufarm Limited (ASX: NUF), where over a 40-year career he led the transformation of a small Australian agribusiness company into one of the world's leading crop protection and seed companies with an extensive global footprint.

He is also Chairman of the Rathbone Wine Group, Director of Cann Group Limited (ASX: CAN), Leaf Resources Ltd (ASX: LER), Cotton Seed Distributors Ltd, AgBiTech Pty Ltd, Go Resources Pty Ltd, an Honorary Life Governor of the Royal Children's Hospital and a former Director of CSIRO and the Burnett Centre for Medical Research.

In addition, as outlined in the Prospectus, issued on 5 October 2017, Mr. Richard Jagger has taken office as Chief Executive Officer of the Company, effective 1 January 2018.

Richard has over 20 years' experience in the Agricultural sector, working for Fortune 500 companies around the world. He managed the introduction of Australia's first agricultural biotech products into the cotton sector. Having worked as a senior executive manager for Monsanto's Roundup business within Australia and New Zealand, he has extensive knowledge of the local business and distribution network, as well as the major Crop Protection companies globally. Over the past five years he co-created the Australian subsidiary of Sinochem – one of the largest Crop Protection companies in China – in the role of Managing Director. He was previously a board member of Crop Life Australia, the peak national industry organisation representing the agricultural chemical and biotechnology (plant science) sector in Australia.

Richard has extensive experience in business management, continuous improvement, strategy development, culture evolution, technology and innovation implementation. With the opportunity to work with different cultures and business styles across the globe, he has a solid understanding of what is required to make a success of cross cultural, or cross geographic businesses.

The former CEO, Mr. Robert Klupacs, will continue with the Company as a Non-executive Director. This will allow the Company to continue to benefit from Robert's strong knowledge of the Company and his extensive Intellectual Property experience.

### **Goals & Objectives for 2018**

In December, Bio-Gene outlined its key objectives for 2018 as:

- Identify appropriate potential partners for product evaluation and development
- Demonstrate the activity of lead molecules Flavocide™ and Qcide™ in an increased number of market segments and target pests via laboratory studies and field trials
- Implement the regulatory required toxicology and environmental safety studies required for product registration filings
- Continue to develop improved production processes for Flavocide™ and Qcide™
- Continue to evaluate and clarify the specifics around the unique mode of action of the Company's lead molecules
- Continue to generate data to support additional intellectual property creation and protection
- Recruit leading scientific and industry experienced scientists to a Scientific Advisory Board.

The key focus for Bio-Gene is to advance its technology in partnership with major agrichemical companies, similar to the existing collaboration with Virbac.

Engagement with international agrichemical companies has commenced to introduce them to the technology and to understand their processes and requirements for engaging in development partnerships. Based on the feedback

of these initial discussions, Bio-Gene is continuing studies to demonstrate safety, efficacy, mode of action and manufacturing capability in order to provide the appropriate partnership enabling data packages.

The Virbac collaboration is progressing well with a field trial involving the application of Flavocide™ for tick control in cattle recently initiated. The results of this trial and a buffalo fly control study are expected to be available in the second quarter of 2018 at which point the Company and Virbac will determine whether to continue and expand the collaboration to include overseas studies if appropriate.

The Company expects to be providing regular updates regarding its research program to the market from Q1 2018, as results come to hand. In addition, Bio-Gene anticipates providing an update on its collaboration discussions by early Q3 2018.

**For further information, please contact:**

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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.

## Appendix 4C

### Quarterly report for entities subject to Listing Rule 4.7B

Introduced 31/03/00 Amended 30/09/01, 24/10/05, 17/12/10, 01/09/16

**Name of entity**

Bio-Gene Technology Limited

**ABN**

32 070 735 950

**Quarter ended ("current quarter")**

31 December 2017

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	4
1.2 Payments for		
(a) research and development	(297)	(356)
(b) management & employee expenses	(198)	(402)
(c) directors' expenses	(36)	(84)
(d) professional services	(45)	(72)
(e) intellectual property	(9)	(28)
(f) listing expenses (see note 4)	(299)	(299)
(g) administration and corporate costs (see note 5)	(228)	(264)
1.3 Dividends received (see note 3)		
1.4 Interest received	12	26
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Government grants and tax incentives		
1.8 Other (provide details if material)		
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(1,100)</b>	<b>(1,475)</b>

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment		(5)
(b) businesses (see item 10)		
(c) investments		
(d) intellectual property	(226)	(226)
(e) other non-current assets		
2.2 Proceeds from disposal of:		
(a) property, plant and equipment		
(b) businesses (see item 10)		
(c) investments		
(d) intellectual property		
(e) 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)		
<b>2.6 Net cash from / (used in) investing activities</b>	<b>(226)</b>	<b>(231)</b>
<b>3. Cash flows from financing activities</b>		
3.1 Proceeds from issues of shares	7,100	7,107
3.2 Proceeds from issue of notes		
3.3 Proceeds from exercise of options		64
3.4 Transaction costs related to issues of shares, convertible notes or options	(610)	(638)
3.5 Proceeds from borrowings		
3.6 Repayment of borrowings		
3.7 Transaction costs related to borrowings		
3.8 Dividends paid		
3.9 Other (provide details if material)		
<b>3.10 Net cash from / (used in) financing activities</b>	<b>6,490</b>	<b>6,533</b>

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of quarter/year to date	2,523	2,860
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,100)	(1,475)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(226)	(231)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	6,490	6,533
4.5	Effect of movement in exchange rates on cash held		
<b>4.6</b>	<b>Cash and cash equivalents at end of quarter</b>	<b>7,687</b>	<b>7,687</b>
<b>5.</b>	<b>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</b>	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	13	31
5.2	Call deposits	174	483
5.3	Bank overdrafts		
5.4	Other (Term Deposits)	7,500	2,009
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>7,687</b>	<b>2,523</b>

<b>6.</b>	<b>Payments to directors of the entity and their associates</b>	<b>Current quarter \$A'000</b>
6.1	Aggregate amount of payments to these parties included in item 1.2	143
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	N/A
6.3	Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	

Directors' fees and consulting fees paid to Directors and their related entities

<b>7.</b>	<b>Payments to related entities of the entity and their associates</b>	<b>Current quarter \$A'000</b>
7.1	Aggregate amount of payments to these parties included in item 1.2	N/A
7.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	N/A
7.3	Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	

<b>8.</b>	<b>Financing facilities available</b> <i>Add notes as necessary for an understanding of the position</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
8.1	Loan facilities	N/A	N/A
8.2	Credit standby arrangements	N/A	N/A
8.3	Other (please specify)	N/A	N/A
8.4	Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		




9.	Estimated cash outflows for next quarter	\$A'000
9.1	Research and development	341
9.2	Management & employee expenses	193
9.3	Directors' expenses	47
9.4	Professional services	107
9.5	Intellectual property	20
9.6	Listing expenses	-
9.7	Administration and corporate costs (see note 5)	15
9.8	Other (provide details if material)	-
<b>9.9</b>	<b>Total estimated cash outflows</b>	<b>723</b>

10.	Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)	Acquisitions	Disposals
10.1	Name of entity	N/A	N/A
10.2	Place of incorporation or registration	N/A	N/A
10.3	Consideration for acquisition or disposal	N/A	N/A
10.4	Total net assets	N/A	N/A
10.5	Nature of business	N/A	N/A

### 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.

Sign here:   
Company Secretary

Date: 30 January 2018

Print name: Roger McPherson

## Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly 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 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. In accordance with Accounting Standards, the Company has expensed the proportion of the capital raising costs incurred in relation to Prospectus preparation for the IPO on the basis of the shares on issue before and after the Listing. ASX Listing Fees have been expensed. A total of \$299,505 has been expensed from the proceeds of the Listing.
5. Net movements in GST are included in this item. The Company is anticipating a GST refund of approximately \$110,000 which is higher than normal due to the GST incurred on certain costs associated with the Listing.
6. Prior Quarter Corrections. Immaterial minor errors in previous quarter reports are corrected on a year to date basis. Movements disclosed for the current quarter have been correctly calculated.