

## BIO-GENE JUNE 2018 QUARTERLY UPDATE

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 for the quarter ending 30 June 2018 and to date. For details on activities which occurred in April 2018 refer to the last quarterly report which was lodged on 30 April 2018.

It has been another productive quarter for Bio-Gene, with the work carried out during the period focused on continuing to improve the value proposition of lead molecules, Flavocide™ and Qcide™.

With Flavocide, Bio-Gene generated positive results versus a full spectrum of grain storage pests, and also confirmed the compound is significantly less toxic to bees and other beneficial insects when compared to commonly used insecticides. Bio-Gene also announced the expansion of mode of action (MoA) studies to identify the best options for multiple compound combinations using the molecule, with data from these studies expected to support a submission for a new class of insecticide.

Applications were also submitted during the period for two new international patents, covering Beta-triketones, a naturally occurring class of chemicals which includes Flavocide. These patent applications cover the use of Beta-triketones to control resistant pest populations and the use of Beta-triketones in combination with other chemistry to control pests. If successful, patent grants will provide protection until at least 2038.

For Qcide, Bio-Gene announced the results of personal insect repellent tests involving human subjects, which demonstrated the compound’s effectiveness as a personal mosquito repellent under high insect pressure conditions. Additionally, a research collaboration was signed with James Cook University (JCU) for the development of a tissue culture program for tree production to support scale up of future Qcide oil production.

In addition to progressing development of the Company’s compounds during the period, Bio-Gene also presented at industry events, most notably the Australian Grain Storage and Protection Conference held in Melbourne on 20 June and continue to engage with potential industry partners.

Outlined below is further detail on Bio-Gene activity during the quarter, reported in line with the Company’s 2018 Goals & Objectives announcement made in December 2017:

### *1. Demonstrating the efficacy of our technology on a range of important pests*

In May, Bio-Gene announced successful results from a study evaluating Flavocide versus a range of grain storage pests conducted in collaboration with the Department of Agriculture & Fisheries (DAF), Queensland.

In the studies, Flavocide was shown to:

- control the full spectrum of key pests evaluated through combination treatments, including strains with history of multiple resistance to currently used insecticides; and
- be successfully used in combination with other compounds as part of resistance management strategies which are currently used by the grain protection industry.

These initial positive results will assist Bio-Gene find the best leads for its technology as well as initiate conversations with potential commercial partners as it moves towards identifying and targeting market opportunities.

Refer to ASX Announcement 28 May 2018 for further details.

In July, Bio-Gene announced the positive results from testing carried out by University of Technology Sydney (UTS), showing Qcide personal insect repellent formulations to be highly effective in first human exposure tests which were performed under high insect pressure conditions.

The strong insect repellency properties exhibited by Qcide through these tests open opportunities for Bio-Gene in the large and growing repellent market, driven by rising incidence of mosquito borne diseases globally.

Refer to ASX Announcement 3 July 2018 for further details.

Bio-Gene has continued to work with key industry companies and scientific collaborators to understand the pest control environment, as well as test its technology across a number of pests in the crop protection, grain storage, public health and consumer application verticals and will be making further announcements as results become available.

## *2. Commercial Opportunities*

Utilising the data developed over the last nine months, discussions are now underway with a number of major international agchem corporations with respect to collaboration or partnership agreements for potential commercial applications of both Flavocide and Qcide.

Interestingly, a number of major industry players are looking to expand their product portfolio to incorporate more biological (natural) products. This interest in biological opportunities has led to a broader interest in Qcide than initially anticipated.

## *3. Novel mode of action studies expanded for Flavocide*

In June, Bio-Gene announced a significant expansion on previous studies of Flavocide's mode of action (MoA), conducted by UK company Neurosolutions Ltd. This expansion builds on previous work and will identify best options for multiple compound combinations using the molecule.

The data generated as part of these new studies will also support submission for a new classification of insecticide and enable Bio-Gene to apply for a 'new class of chemistry' with the Insect Resistance Action Committee (IRAC).

Achieving a unique classification for Flavocide will further increase engagement with both industry experts and companies who are looking to find new applications of the technology, so they can offer new and valuable commercial products.

Refer to ASX Announcement 26 June 2018 for further details.

## *4. Building upon our toxicology data trials towards creating a registration package*

In June, Bio-Gene announced positive study results confirming Flavocide is significantly less toxic to bees when compared with other commonly used insecticides.

This result indicates Flavocide is unlikely to require a cautionary statement on product labels regarding impact on bees or other pollinating insects, thus increasing its attractiveness as an alternative to products under regulatory restriction, and strongly enhancing the commercial value proposition of the molecule.

Bees are economically important as they are a major pollinator of agricultural crops as well as being an integral part of the broader environment. Regulators of pesticides therefore require bee toxicity information be provided in order to assess the impact of use of products on bees around crops.

Refer to ASX Announcement 18 June 2018 for further details.

In July, Bio-Gene announced further positive safety study results which demonstrated Flavocide is safer for arthropods (insects and mites) which are beneficial for high crop yields, when compared to a commonly used insecticide. These results complement the positive results announced in June which demonstrated Flavocide is significantly less toxic to bees, when compared to commonly used insecticides, indicating its relative safety when used around bees.

Refer to ASX Announcement 23 July 2018 for further details.

The trial work for Flavocide's 28-day oral and dermal toxicity studies is close to completion, and the Company expects to announce results in the near future. In addition, the preliminary toxicity testing on Qcide will be commenced in the current quarter with results expected to be available before the end of the calendar year.

#### 5. *Improving upon our manufacturing cost of our molecules*

In July, Bio-Gene announced a research collaboration agreement with James Cook University (JCU) for the development of a tissue culture system for the *Eucalyptus cloeziana* chemotype being grown in plantation in North Queensland to support scale up of Qcide oil production.

Under the agreement, JCU will establish a micropropagation laboratory at JCU's Smithfield Campus and develop a system for tissue culturing and propagating plant material from superior-yielding trees currently being grown in plantation.

The project aims to develop techniques and establish procedures for a tissue culturing program which can then be implemented in commercial nurseries for seedling production, enabling expansion of plantation areas to satisfy future demands for Qcide oil along with optimising yield and quality of oil produced.

Refer to the ASX Announcement 3 July 2018 for further details.

#### 6. *Improving upon our I.P. position*

In July, Bio-Gene announced the submission of two new international patent applications covering the use of Beta-triketones, a naturally occurring class of chemicals which form the basis of Flavocide.

The first patent covers use of Beta-triketones to control resistant pest populations, and the second covers use of Beta-triketones in combination with other chemistry to control pests.

These submissions are significant milestones in the development of the Company's Intellectual Property (I.P) and if successfully granted will provide protection to at least 2038.

Refer to the ASX Announcement 10 July 2018 for further details.

## 7. Corporate

### Release of Shares from escrow

During the quarter a total of 5,681,696 ordinary Bio-Gene shares were released from escrow. Bio-Gene has 127,724,471 ordinary shares on issue as of the end of the quarter of which 112,354,868 are quoted on the ASX.

### Cash Balance

At the end of the first quarter, as outlined in the attached Appendix 4C, Bio-Gene held \$6.7 million in cash.

The third calendar quarter of 2018 will prove to be a busy one for Bio-Gene as the Company continues to focus on its objectives of gaining valid scientific data to further value add to its technology. Bio-Gene will be using this data and knowledge to continue to discuss opportunities for the technology with a number of relevant potential commercial partners.

- ENDS -

### For further information, please contact:

#### Bio-Gene Technology Limited:

Richard Jagger

Chief Executive Officer

P: 03 9628 4178

E: [bgt.info@bio-gene.com.au](mailto:bgt.info@bio-gene.com.au)

Roger McPherson

CFO & Company Secretary

P: 03 9628 4178

E: [bgt.info@bio-gene.com.au](mailto:bgt.info@bio-gene.com.au)

#### Media/investor relations:

Ben Walsh or Kyahn Williamson

WE Buchan

T: 03 9866 4722

E: [bio-gene@we-buchan.com](mailto:bio-gene@we-buchan.com)

### 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 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")**

30 June 2018

Consolidated statement of cash flows	Current quarter \$A'000	Year to date \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	3	7
1.2 Payments for		
(a) research and development	(326)	(1,259)
(b) management administration expenses	(65)	(350)
(c) directors' expenses	(48)	(179)
(d) professional services	(84)	(251)
(e) intellectual property	(18)	(52)
(f) listing expenses (see note 4)	-	(299)
(g) administration and corporate costs (see note 5)	(78)	(229)
1.3 Dividends received (see note 3)		
1.4 Interest received	44	115
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Government grants and tax incentives	123	123
1.8 Other (provide details if material)		
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(449)</b>	<b>(2,374)</b>

Consolidated statement of cash flows	Current quarter \$A'000	Year to date \$A'000
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	(3)	(13)
(b) businesses (see item 10)		
(c) investments		
(d) intellectual property		(226)
(e) other non-current assets		(70)
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>(3)</b>	<b>(309)</b>
<b>3. Cash flows from financing activities</b>		
3.1 Proceeds from issues of shares		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		(642)
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>0</b>	<b>6,529</b>

Consolidated statement of cash flows	Current quarter \$A'000	Year to date \$A'000
<b>4. 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	7,158	2,860
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(449)	(2,374)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	(3)	(309)
4.4 Net cash from / (used in) financing activities (item 3.10 above)		6,529
4.5 Effect of movement in exchange rates on cash held		
<b>4.6 Cash and cash equivalents at end of quarter</b>	<b>6,706</b>	<b>6,706</b>

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	6	18
5.2 Call deposits	300	240
5.3 Bank overdrafts		
5.4 Other (Term Deposits)	6,400	6,900
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>6,706</b>	<b>7,158</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	156
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	700
9.2	Management administration expenses	100
9.3	Directors' expenses	60
9.4	Professional services	140
9.5	Intellectual property	20
9.6	Administration and corporate costs (see note 5)	100
9.7	Other (provide details if material)	-
<b>9.8</b>	<b>Total estimated cash outflows</b>	<b>1,120</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: 26 July 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.
6. 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.