

## BIO-GENE JUNE 2021 QUARTERLY UPDATE

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- **Continued progress in relation to key value generating milestones outlined at AGM**
- **Advancement of BASF/GRDC stage 3 field grain storage trials – results available for review in Q4 CY2021**
- **Advancement of Stage 2 of Clarke Mosquito product development program with results expected Q3 CY2021**
- **Positive developments relating to the manufacturing processes of both Flavocide™ and Qcide™**

Bio-Gene Technology Limited (ASX: BGT, 'Bio-Gene' or 'the Company'), an agtech development company enabling the next generation of novel insecticides, today announced an update on its activities for the quarter ending 30 June 2021 and to date.

Bio-Gene Chief Executive Officer and Managing Director, Richard Jagger said: "Bio-Gene's focus remains on our short and long term goals as outlined at the AGM last year. In the period since that meeting we are delivering on our milestones, and are working to complete the remaining significant target outcomes for this year.

"These milestones support our aim to develop innovative and safe insecticides based on two unique molecules in partnership with leading players in the agrochemical and public health sectors. We continue to focus on our objective to generate multiple revenue streams from technology licensing fees, milestone payments and royalties, which will be realised by:

- Achieving and owning registrations of Qcide and Flavocide by generating the data package required by regulatory bodies worldwide;
- Commercialising our technology through collaboration with commercial partners on product development, marketing and distribution;
- Developing proprietary manufacturing know-how and production capacity;
- Building a broad and product-focused patent and proprietary rights portfolio; and
- Identifying and promoting additional applications for Qcide and Flavocide through targeted research.

"In the June quarter, significant progress has been made in relation to both product evaluation and commercial engagement in the key target markets of grain storage protection, public health and consumer products. This is supported by advances in manufacturing and regulatory programs critical to the successful commercialisation of both Qcide and Flavocide."

### **DEVELOPMENT OF ACTIVE INGREDIENT INTERNATIONAL REGISTRATION PACKAGE**

#### **Toxicity / registration enabling studies**

Developing the comprehensive product data package to support our regulatory approvals is critical to our overall strategy. Our initial focus has been on the regulatory requirements for Australia through the APVMA (Australian Pesticides & Veterinary Medicines Authority). To confirm the requirements of registration in additional geographies, Bio-Gene engaged the services of an international regulatory consultancy group during the quarter to undertake detailed data gap analysis to define regulatory requirements and strategic pathways for registration in the USA and Europe. This will assist in focusing future studies to streamline the registration process as much as possible, and ensure the most efficient use of our resources, while meeting the priorities of our potential commercial partners as identified in on-going discussions. We are very confident that our results to date support the targeted applications for our products and form a solid basis for the future work required to achieve our registration goals. Our approach focuses on developing a data package for both molecules which will support regulatory approval across our key verticals in our partners' major markets.

## **Manufacturing**

### Flavocide

With our manufacturing partner Boron Molecular, important work was completed during the quarter which brings us closer to finalising the scale up of Flavocide production and completing the 5-batch pilot scale production validation. This is an essential step for demonstrating the ability to manufacture product consistently, as well as providing product chemistry data required as part of the registration dossier. It will also enable the finalisation of the product specification for the technical grade material, and the provision of product for use in definitive toxicological studies.

### Qcide

Guided by James Cook University, we completed modifications to the on-farm oil extraction system following the harvest in November 2020 and undertook another complete harvest in June 2021. This incorporated the learnings from our laboratory findings aimed at realising additional yield improvements through optimising processing conditions. We also undertook experiments involving manipulation of the biomass to further enhance oil extraction. Most importantly, we completed production under controlled conditions of five batches of Qcide oil that demonstrated excellent consistency of the process under commercial conditions. This will enable establishment of the product specification, in particular a minimum level of tasmanone, and will form a key component of our product chemistry data package to support registration of Qcide oil as an active constituent. We are also continuing the collaboration with James Cook University to improve tree quality through tree selection that aims to enhance biomass production, oil content in biomass and the chemical profile of the oil.

## **EFFICACY: LEAD PRODUCT DEVELOPMENT AREAS**

### **Long term stored grain product efficacy – working with BASF and GRDC**

During the quarter we provided an interim report on Stage 3 of the four-way collaborative research program into stored grain pest control with BASF, Grains Research and Development Corporation (GRDC), and Queensland Department of Agriculture and Fisheries (DAF). Results showed that Flavocide in combination with low rates of other chemistry groups controlled all key targeted stored grain pests (including highly resistant strains) for the initial period of 3 months. These results provide further confidence in the commercial viability of Flavocide in stored grain applications. This project is progressing well, with the parties agreeing to extend the trial out to 9 months based on these positive results. The 9-month results are expected to be available for review by the end of this calendar year and will be reported in the first quarter of CY2022. Additional studies to confirm activity of Flavocide in grains (maize, barley) other than wheat are also being undertaken as part of this project.

### **Public Health - working with Clarke on mosquito control**

The development work underway with Clarke Mosquito Control on Qcide and Flavocide for development of vector control products in the United States continues to progress well. On our original road map, we anticipated to be able to provide the market feedback on the Clarke trials in Q2 of this calendar year. This is now anticipated to be in Q3 as we work with Clarke on the next steps of the program. Our conversations with Clarke continue to be positive and we will provide updates to the market in due course.

### **Material Transfer Agreements (MTAs)**

Evaluation of our two lead molecules continues under our existing and new MTAs across a number of product applications. The next steps for these evaluations will be to develop advancing agreements with some of these commercial companies, similar to the on-going agreements we have with BASF and Clarke. It is an important part of Bio-Gene's strategy to continue to foster new potential applications for our products, and develop a pipeline of future commercial relationships that have the potential to lead to revenue generating programs

## **EFFICACY: INTERNAL PROGRAMS**

### **Ongoing Research Program at Purdue University**

Bio-Gene continues to work closely with Professor Catherine Hill at Purdue University to support our mosquito programs and programs targeting other pests. Current studies on mosquitoes are investigating the ability of our products to interfere with the behaviour and feeding of mosquitoes as well as the spatial effects from the vapour phase.

### **Initiation of Flying Insect Research at the University of Florida**

The company has engaged with researchers at the University of Florida (UF) to test Qcide and Flavocide against resistant strains of flying insects, initially with houseflies. This is an extension of work undertaken at the University of Technology in Sydney that confirmed activity against house flies. The UF studies extend this work by focusing on insect strains resistant to commonly used insecticides. Phase one testing with UF confirmed the activity of both Qcide and Flavocide against resistant strains showing a close alignment in their dose response curves between both the resistant and susceptible strains. Phase two will explore synergistic traits that might be evident in combination treatments of Qcide or Flavocide with other compounds. This project will greatly assist the positioning of both products for flying insect control in both consumer and professional pest control markets.

### **Other Pest Research in Europe**

As previously reported, Bio-Gene is working with leading contract research organisations (CROs) to conduct a range of studies with our products which are designed to support and build upon previous internal studies, identify new market opportunities and to further our understanding of the technology. Our UK-based CRO is currently undertaking studies with Flavocide and Qcide on crop and other segment pests to broaden the scope of pests targeted, including resistant strains, and evaluate combination effects on efficacy, and efficacy against insect life stages. These studies are now underway and will help support the proposition for specific target pest applications in our discussions with potential commercial partners.

## **INTELLECTUAL PROPERTY**

During the quarter, we were able to announce the allowance of two of new patents in Australia. Similar applications for these patents are advancing in selected overseas jurisdictions of commercial importance. These patent applications cover specific applications of platforms in the control of resistant pest populations when used alone and in combination with other chemistries and provide patent protection out to 2038.

## **INVESTOR COMMUNICATIONS**

Bio-Gene has undertaken a number of briefings over the quarter, including an on-air interview with ausbiz to discuss our patent allowances and business strategy. Due to the on-going issues with COVID-19 restrictions across the country, it has been very difficult to conduct briefings in person, however we continue to use electronic platforms to conduct virtual meetings. In addition, we continue to build on our social media interactions with regular communications on company activities and global issues relevant to our business development activities. These and on-going updates can be found on our social media pages:

- LinkedIn: - <https://au.linkedin.com/company/bio-genetechnology>
- Twitter: - <https://twitter.com/biogenetechltd>

We also conducted interviews with industry leader Doug Rathbone and Professor of Entomology at Purdue University Catherine Hill touching on the emerging trends and issues evident in the markets we are focussed on. Videos of these interviews can be found below and via our website at [www.bio-gene.com.au](http://www.bio-gene.com.au).

The Company will continue to focus on investor briefings and industry presentations over the course of the year.

**CASH POSITION**

As at 30 June 2021, Bio-Gene held \$3.9 million in cash, which based on current plans, provides the Company with sufficient cash to operate beyond 12 months.

In June 2021, former directors Donald Brumley and Kevin Rumble, repaid loans on shares held under the Loan Share Plan, in accordance with the Plan rules. The company received \$272,600 from these directors. This transaction consolidates their positions as major shareholders in Bio-Gene.

Approved for release by the Board of Directors.

- ENDS -

**For further information, please contact:***Bio-Gene Technology Limited:*

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**About Bio-Gene Technology Limited**

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, 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.

## 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 June 2021

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	3	43
1.2 Payments for		
(a) research and development	(387)	(1,298)
(b) commercialisation expenses	(48)	(217)
(c) management administration expenses	(35)	(145)
(d) directors' expenses	(50)	(168)
(e) professional services	(31)	(142)
(f) intellectual property	(48)	(117)
(g) administration and corporate costs (see note 6)	(39)	(333)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	15	45
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	506
1.8 Other (provide details if material)	-	-
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(620)</b>	<b>(1,826)</b>

<b>2.</b>	<b>Cash flows from investing activities</b>		
2.1	Payments to acquire or for:		
	(a) entities		
	(b) businesses		
	(c) property, plant and equipment	-	(3)
	(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)		
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>-</b>	<b>(3)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
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)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings (lease)	(1)	(12)
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	273	273
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>272</b>	<b>240</b>

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

<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 period	4,281	5,522
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(620)	(1,826)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	(3)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	272	240
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>3,933</b>	<b>3,933</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	10	27
5.2	Call deposits	3,923	2,054
5.3	Bank overdrafts	-	-
5.4	Other (Term Deposits)	-	2,200
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>3,933</b>	<b>4,281</b>

<b>6.</b>	<b>Payments to related parties of the entity and their associates</b>	<b>Current quarter \$A'000</b>
6.1	Aggregate amount of payments to related parties and their associates included in item 1	187
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

<b>7. Financing facilities</b>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
<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
<b>7.4 Total financing facilities</b>	<b>N/A</b>	<b>N/A</b>
<b>7.5 Unused financing facilities available at quarter end</b>		<b>N/A</b>
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.		

<b>8. Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1 Net cash from / (used in) operating activities (item 1.9)	(620)
8.2 Cash and cash equivalents at quarter end (item 4.6)	3,933
8.3 Unused finance facilities available at quarter end (item 7.5)	-
8.4 Total available funding (item 8.2 + item 8.3)	<b>3,933</b>
<b>8.5 Estimated quarters of funding available (item 8.4 divided by item 8.1)</b>	<b>6</b>
<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: 21 July 2021

Authorised by: The Board of Directors  
(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.
8. During the quarter former directors repaid outstanding loans in accordance with the rules of the Loan Share Plan totalling \$272,600. This amount is reflected in item 3.9.