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ALEXIUM

**QUARTERLY ACTIVITIES REPORT
FOR THE PERIOD ENDED**

30 June 2021

Q4 FY2021 Highlights:

- **Sales & Cash Receipts for Q4**
 - Sales of US\$2.2m and cash receipts of US\$1.6m
 - Based on the adoption trends for the Company's new product lines, this Quarter's upward sales trend is expected to continue in 1H FY2022
- **Commercialization of Alexium's Total Mattress Cooling System (TMCS)**
 - The Company announced initial sales for the TMCS initiative
 - The mattress design provides an integrated solution (four different Alexicool® products) for enhanced and extended cooling through the night
- **Eclipsys™: Rebranding of Phonon Technology**
 - Key technology platform has been rebranded as Eclipsys™
 - The patent pending technology continually pulls heat away from the user, cooling them by up to 200% more than competing products
- **Eclipsys™ Platform Developed for Body Armor Market**
 - The Company has completed product design work for body armor and is in late-stage evaluation with a body armor provider
 - Human studies have been conducted and early test data has shown that the Eclipsys™-based body armor reduces the heat index of the wearer's microclimate by more than 10 °F
- **Successful Production-Scale Run of FR NyCo Technology**
 - Conducted a successful production-scale run of the FR NyCo technology via a rolled goods application
 - Work will continue in Q1 FY2022 for optimal design and wearability after which production-scale goods will be provided to the military for testing and evaluation

Introduction by CEO, Dr. Bob Brookins:

"For the Alexium team, we are at the most exciting time that I have seen since I joined the Company. While there are a number of factors contributing to this sense of excitement, I believe the greatest driver here is the commercial success we are having across our product platforms:

- *Market adoption of our BioCool™ products is strong*
- *Total mattress cooling system (TMCS) is commercialized with full run rate in 1H FY2022*
- *Eclipsys™ product adoption for body armor is slated for 1H FY2022 (a new market for Alexium)*
- *Other product lines such as Alexiflam NF for mattress FR barriers (socks) and Eclipsys™ for mattresses, are in late-stage customer-product evaluation and supply chain development is underway*

Fuller updates on these efforts will be provided in upcoming announcements, but as you can see, Alexium has reached a critical stage where our key strategic initiatives are reaching commercial fruition.

Just a few years ago, the Company's sales were based on two discrete products to a single market. Our sales team is now actively engaged with more than six product platforms for a range of addressable markets. In conjunction with the release of our annual results, I look forward to sharing an investor presentation which will outline our strategic initiatives for the coming year as we expand beyond our historical bedding applications.

Sales Summary for the Reporting

Sales for the reporting period were US\$2.2M with cash receipts of US\$1.6m. While cash receipts are comparable with the prior reporting period, sales numbers are significantly increased versus the previous reporting period as well as the same period last year. These numbers are driven by sales of new product lines supported by continued sales in our core business. Based on the adoption trends for the Company's new product lines, as well as the total mattress cooling system (TMCS) and BioCool™ products, this Quarter's upward sales trend is expected to continue in 1H FY2022 with strong support from sales of our other product lines.

Regarding operating activity outflows, (refer to Item 1.2 of the Appendix 4C), the outflows were predominantly comprised of raw material purchases, manufacturing costs, staffing costs, and corporate/administrative costs.

Commercialization of Alexium's Total Mattress Cooling System

First sales and the commercial launch of a suite of Alexicool® products for a total mattress cooling system (TMCS) were achieved during the reporting period. Coupling a range of textile & foam products for a full mattress design has been an initiative for growth in the US bedding market. This opportunity extends and deepens Alexium's customer base, provides increased visibility to revenues and further differentiates Alexium from the competition. The Company anticipates further significant growth in this market as it incorporates its proprietary technologies into other TMCS designs. The Company has completed multiple production runs of this new platform and this product line will reach full-scale production in 1H FY2022.

Eclipsys™: Rebranding of Phonon Technology

During the reporting period the Company has rebranded its Phonon technology to Eclipsys™. Eclipsys™ products are a true breakthrough for thermal management in textile- and foam-based consumer products. The patent pending technology continually pulls heat away from the user, cooling them by up to 200% more than competing products. On the Eclipsys™ rebranding, Alexium VP, Sales and Marketing Chris Crawford said, "We have built a strong brand identity in the US bedding market with our Alexicool® and BioCool™ product lines. The Eclipsys™ technology will be a key driver for Alexium's growth in large adjacent markets. The "Eclipsys™" name positions us with a versatile brand to leverage across the broad range of addressable markets."



Eclipsys™ Platform Developed for Body Armor Market

A strategic initiative for the Company is to extend its thermal management products outside of the US bedding market to adjacent markets. The new Eclipsys™ product line will be a key driver in this effort. As part of our strategic review, body armor was identified as a target market because of the significant impact of the introduction of Eclipsys™ on the product user experience

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and the meaningful size of the market. While body armor provides the military and first responders protection from projectiles, the body armor imposes significant thermal stress on the wearer due to its poor intrinsic thermal management properties resulting in excessive user fatigue and in a number of cases acute health issues.

Work by the Company in 2H FY2021 has driven this effort forward with successful product design work completed, key test data acquired, and an initial customer in late-stage product qualification. Human studies have been conducted and early test data has shown that the Eclipsys™-based body armor reduces the heat index of the wearer's microclimate by more than 10 °F. The Company looks forward to providing updates for the market in 1H FY2022.

Successful Production-Scale Run of FR NyCo Technology

In this reporting period, the Company conducted a successful production-scale run of its FR NyCo technology via a rolled goods application. Work on optimization of line conditions and chemistry integration has resulted in successfully achieving extended wash durability and FR performance – the two critical specifications required by the military that the Company has been working to resolve. Work will continue in Q1 FY2022 for optimal design and wearability after which production-scale goods will be provided to the military for testing and evaluation.

The above work was part of a recent initiative to develop an alternative approach to the garment application process that the Company has been working on with Pine Belt for a number of years. Key developments from the rolled-goods application are being evaluated as to how they can be leveraged for a successful production run for the garment applications. Commenting on the successful trials, Innovation Manager Jonas Larue stated, "Recent successes with our FR NyCo technology trials mark key milestones for this initiative, and I'm excited to know we will have production-scale goods available for testing and evaluation in the coming months. For decades, a flame retardant nylon/cotton fabric has been sought after, and we have now identified those essential points where the chemistry and the application method must work together. Our team has done a great job of working through that issue with the pathway to a commercial solution now clear."

Appendix 4C

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

Name of Entity	
ALEXIUM INTERNATIONAL GROUP LIMITED	
ABN	Quarter ended
91 064 820 408	30-June-2021

Consolidated statement of cash flows	Current quarter \$US'000	Year to date (12 months) \$US'000
1. Cash flows from operating activities		
1.1 Receipts from customers	1,594	7,042
1.2 Payments for		
(a) research and development	(139)	(391)
(b) product manufacturing and operating costs	(918)	(4,143)
(c) advertising and marketing	(20)	(78)
(d) leased assets	(19)	(96)
(e) staff costs	(605)	(2,243)
(f) administration and corporate costs	(246.700)	(1,187)
1.3 Dividends received (see note 3)		
1.4 Interest received	3	6
1.5 Interest and other costs of finance paid	(82)	(331)
1.6 Income taxes paid		
1.7 Government grants and tax incentives		
1.8 Other (GST received)	3	28
1.9 Net cash from / (used in) operating activities	(430)	(1,393)

2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities		
(b) businesses		
(c) property, plant and equipment	(44)	(113)
(d) investments		
(e) intellectual property	(78)	(774)
(f) other non-current assets		

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Appendix 4C
Quarterly report for entities subject to Listing Rule 4.7B

Consolidated statement of cash flows		Current quarter \$US'000	Year to date (12 months) \$US'000
2.2	Proceeds from disposal of:		
	(a) entities		
	(b) businesses		
	(c) property, plant and equipment		5
	(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	(122)	(882)
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		(2)
3.5	Proceeds from borrowings		468
3.6	Repayment of borrowings	(32)	(143)
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	(32)	323
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	3,531	4,741
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(430)	(1,392)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(123)	(882)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(32)	323
4.5	Effect of movement in exchange rates on cash held	(13)	143
4.6	Cash and cash equivalents at end of quarter	2,933	2,933

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Appendix 4C
Quarterly report for entities subject to Listing Rule 4.7B

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 \$US'000	Previous quarter \$US'000
5.1 Bank balances	2,332	
5.2 Call deposits		
5.3 Bank overdrafts		
5.4 Other (provide details)	601	
5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)	2,933	

6. Payments to related entities of the entity and their associates	Current quarter \$US'000
6.1 Aggregate amount of payments to related parties and their associates included in item 1	
6.2 Aggregate amount of payments to related parties and their associates included in item 2	

7. Financing facilities	Total facility amount at quarter end \$US'000	Amount drawn at quarter end \$US'000
7.1 Loan facilities	3,602	3,602
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 Total Financing facilities	3,602	3,602
7.5 Unused financing facilities available at quarter end		
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.		
4-year 6% A\$5.15M secured convertible note 8 finance leases with a loan balance of \$0.06M @ an average rate of 9.8%		

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Appendix 4C
Quarterly report for entities subject to Listing Rule 4.7B

8.	Estimated cash available for future operating activities	\$US'000
8.1	Net cash from / (used in) operating activities (item 1.9)	(430)
8.2	Cash and cash equivalents at quarter end (item 4.6)	2,933
8.3	Unused finance facilities available at quarter end (item 7.5)	0
8.4	Total available funding (item 8.2 + item 8.3)	2,933
8.5	Estimated quarters of funding available (item 8.4 divided by item 8.1)	7
<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: N/A	
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: N/A	
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: N/A	
<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>		

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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: 30 July 2021

Authorised by: The Board of Directors

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.

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