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ALEXIUM

**QUARTERLY ACTIVITIES REPORT
FOR THE PERIOD ENDED**

31 March 2021

Q3 FY2021 Highlights:

- **Key Commercial Successes for Alexium's Proprietary PCM**
 - The Company's PCM brand of BioCool™ products receives USDA certification and has the highest biobased content of any microencapsulated PCM with this certification
 - First sales of new biobased products in Q3 FY2021
- **Progress in Commercialisation of Thermal Management Technologies**
 - Total mattress cooling system (TMCS) based on Alexicool® products set to launch this US summer
 - Company's novel Phonon technology in multiple commercial evaluations
- **Cash activity for Q3 FY 2021**
 - Cash receipts totaled US \$1.5m
 - Company has received confirmation of forgiveness on the first of two loans received under US stimulus packages
- **Update on development of Company's FR NyCo technology**
 - Now pursuing a two-prong commercialisation approach for NyCo
 - This approach allows the Company to most effectively utilize key manufacturing insights gained over the reporting period
- **Commercialisation of Alexiflam NF for FR Socks as mattress barrier fabrics**
 - Successful production runs with a FR sock manufacturer
 - Marketing to mattress-component manufacturers and brands has been successful in driving the market

Introduction by CEO, Dr. Bob Brookins:

"Driving revenue growth is the primary focus of the Board and Management Team. As investors review our quarterly report, I trust you will see this in the advances we have made across our product lines. While easing of COVID-19 restrictions has made this easier, this is being driven by our new VP, Sales and Marketing Chris Crawford. In a short time, he has honed the commercial vision and strengthened the team by bringing in new sales executives with valuable experience for our target markets. The new staff thrive on bringing our innovative product lines to market which has been and will continue to be our focus. I look forward to investors seeing how this team can drive Alexium's success.

"After a year now where COVID-19 has impacted us so greatly, I am glad to say that Alexium is now seeing a turn for the better here in South Carolina, and in the United States more generally where things are getting back to normal. Meeting with customers and planning for new product development is an essential aspect of our work, and this is much easier today than it has been. The Company is excited about what this means for us to drive our strategic initiatives and the Company's growth."

USDA BioPreferred Certification for BioCool™ Product

The Company's successful line of Alexicool® products was expanded in late 2020 with the release of its proprietary line of biobased and biodegradable phase change materials (PCMs). We are excited to announce that this new product line has been trademarked as BioCool™ products and

has been certified by the United States Department of Agriculture as a biobased product under their BioPreferred Program. Notably, our BioCool™ product (labelled as “BIOD 26” with the USDA) has the *highest biobased content of any microencapsulated PCM in the market* with 92% biobased content. This certification provides the BioCool™ product line with a unique position as a sustainable product with high cooling performance.

Sales of BioCool™ Products

On further news for our BioCool™ product line, initial sales were achieved in the 3rd quarter for new consumer products launching in the US bedding market. These sales represent a mix of new and current end-products where the Company is supplying PCM products. The rapid adoption by the market demonstrates the pull for sustainable products for US consumer goods. Commenting on this news, Alexium VP Chris Crawford commented, “The Sales Team is excited by the early success with BioCool™ products and sees opportunities for PCM and flame retardants materials in adjacent markets to the bedding industry.”

Business Updates on Other Thermal Management Technologies

Further advances have also been made in the Company’s thermal management product lines:

- Commercialisation of the total mattress cooling system (TMCS) based on the Company’s Alexicool® product line is proceeding well and will see market launch this summer in the US. All technical support for this effort is effectively complete, and the Company is in preparations to supply production-scale goods in Q4 2021.
- Commercialisation of TMCS models based on the Company’s novel Phonon technology is proceeding well with the product line under evaluation by potential partners.
- Outside of the bedding market, adjacent market opportunities for Phonon are actively being developed where the perpetual cooling properties of the technology can be best leveraged. While this work is at early stages, the momentum here is already strong, providing excellent indications of the technology’s value.

Cash and Operating Activity for the Quarter

Cash receipts totaled US\$1.5m which is a decrease from the prior quarter. This reduction was anticipated and follows similar Q2-to-Q3 changes in prior fiscal years. This trend aside, the Board and Management recognize that the sales numbers reflect marginal growth over the past 12 months as a result of the impact of COVID and in particular its impact on certain elements of the total mattress supply chain which caused delays in the development of new products. Customers have confirmed that these development initiatives are now moving forward given stronger customer momentum as COVID-19 concerns are mitigated by the rapid vaccination rollout and reopening of our core North American market.

The Company has received confirmation of forgiveness on the first of two loans received under US stimulus packages. The amount of the first loan forgiven is US\$460K. We estimate that the forgiveness application for the second loan in the amount of US\$468K will be open sometime in Q1 FY2022.

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.

Manufacturing Scale Production of FR NyCo Technology

Over the past year, the Company has been working with Pine Belt on the manufacturing process of Alexium's FR NyCo treatment for producing flame retardant uniforms for military applications. Marrying the FR technology with the manufacturing process has been the major hurdle associated with this effort. In this reporting period, the disjunction and the viable methods for resolving it were identified and resolved.

Alexium is now pursuing a two-prong commercialisation approach for NyCo:

- A solution for rolled goods application; and
- The solution for finished garment application, as used at Pine Belt, which is under review and is expected to encounter further delays.

The advantage of the two-prong approach is that Alexium is now in a position to leverage these recent developments and work with a wider group of customers who service the military. We anticipate having further updates on the commercialisation pathway in the next few months.

Progress in Commercialisation of Alexiflam® NF for FR Sock Applications

A major strategic initiative for the Company is the commercialisation of Alexiflam® NF for the flame retardancy of cotton-based mattress socks to provide flame retardant barriers in foam mattresses. Significant progress was made during the reporting period on two key fronts:

- Marketing to mattress-component manufacturers and brands has been successful in driving the market for integration of FR cotton mattress socks in upcoming bedding lines.
- Successful production runs with a FR sock manufacturer have further solidified the supply chain to support customers in the US.

The Company is encouraged by the momentum on this effort and looks forward to the completed commercialisation of this product.

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	31-March-2021

Consolidated statement of cash flows	Current quarter \$US'000	Year to date (9 months) \$US'000
1. Cash flows from operating activities		
1.1 Receipts from customers	1,533	5,448
1.2 Payments for		
(a) research and development	(92)	(252)
(b) product manufacturing and operating costs	(1,061)	(3,225)
(c) advertising and marketing	(26)	(57)
(d) leased assets	(22)	(77)
(e) staff costs	(485)	(1,637)
(f) administration and corporate costs	(334)	(940)
1.3 Dividends received (see note 3)		
1.4 Interest received	1	2
1.5 Interest and other costs of finance paid	(84)	(249)
1.6 Income taxes paid		
1.7 Government grants and tax incentives		
1.8 Other (GST received)	2	25
1.9 Net cash from / (used in) operating activities	(568)	(962)

2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities		
(b) businesses		
(c) property, plant and equipment	(24)	(68)
(d) investments		
(e) intellectual property	(135)	(696)
(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 (9 months) \$US'000
2.2	Proceeds from disposal of:		
	(a) entities		
	(b) businesses		
	(c) property, plant and equipment	5	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	(154)	(759)
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)	(2)
3.5	Proceeds from borrowings	468	468
3.6	Repayment of borrowings	(39)	(111)
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	427	355
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	3,842	4,741
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(568)	(962)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(154)	(759)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	427	355
4.5	Effect of movement in exchange rates on cash held	(16)	156
4.6	Cash and cash equivalents at end of quarter	3,531	3,531

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	2,466	2,896
5.2 Call deposits		
5.3 Bank overdrafts		
5.4 Other (provide details)	1,065	1,287
5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)	3,531	4,183

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	3,628	3,628
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 Total Financing facilities	3,628	3,628
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 10 finance leases with a loan balance of \$0.09M @ 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)	(568)
8.2	Cash and cash equivalents at quarter end (item 4.6)	3,531
8.3	Unused finance facilities available at quarter end (item 7.5)	0
8.4	Total available funding (item 8.2 + item 8.3)	3,531
8.5	Estimated quarters of funding available (item 8.4 divided by item 8.1)	6
<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 April 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.