

26 July 2023

## **QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 30 JUNE 2023**

### **Operational highlights:**

- Completed the second pilot production run of 'Forest-Friendly' Nullarbor™ fibres with R&D partner Birla Cellulose, a division of multinational Indian conglomerate Aditya Birla Group
- New patent application filed with IP Australia to cover a novel methodology for drying microbial cellulose which dramatically reduces shipping costs – a key breakthrough for the commercial application of the Company's Jelli Grow™ technology
- Good progress on R&D program for microbial cellulose-based 'vegan leather' material, with several prototypes under development
- Vegan leather prototypes include a unique material produced via the fermentation of Pilsner Urquell beer, which was used to make an haute couture dress by designer Jakub Polanka that debuted at the 57th Karlovy Vary International Film Festival
- \$374,063 R&D Tax Incentive Rebate received from Australian Government; non-dilutive funding ahead of third pilot spin for Nullarbor™ fibres alongside Birla Cellulose

### **Outlook and key objectives:**

- Advance development of Nullarbor™ fibres with Birla Cellulose, with third pilot production spin now scheduled for the September quarter and fibre from the second spin to be converted to fabrics and garments with selected partners
- Accelerate commercial development activities for Jelli Grow™ in the horticultural market and finalise technology transfers and production agreements with our supply partner Hainan Guangyu Biotechnology
- Continue R&D program for vegan leather, including additional collaborations and promotion of innovative material solutions

Nanollose Limited (ASX:NC6) ("Nanollose", the "Company"), a leading bio-materials company commercialising scalable technology to create fibres, fabrics and other materials from microbial cellulose, is pleased to provide shareholders with an overview of activities undertaken during the three-month period ended 30 June 2023 ("quarter", "reporting period").

## **Management commentary**

**Executive Chairman Dr Wayne Best said:** *“The June quarter marked another period of strong progress by Nanollose in pursuit of the Company’s long-term commercial objectives. Key milestones early in the quarter were highlighted by the successful completion of the second pilot production run for Nanollose’s Nullarbor fibres with Birla Cellulose. The fibre from that spin has now been sent to our manufacturing partner, Paradise Textiles, where it will be converted into different fabrics, and sets the Company up for the commencement of a third pilot spin in the September quarter where we are targeting increased production volumes to demonstrate scale.”*

*“This was accompanied by an exciting break-through with our microbial cellulose dewatering technology that facilitated a dry powder formulation of Jelli Grow, resulting in commercial discussions with our supply partner and potential customers. The June quarter also saw good progress towards a viable vegan leather material, culminating in a prototype being used in an haute couture dress for Pilsner Urquell at the Karlovy Vary International Film Festival. With another period of strong operating momentum under our belts, the Company looks forward to providing more updates in Q3 on the continued execution of our commercial rollout strategy, with several exciting production updates in the pipeline.”*

## **Operational overview:**

During the quarter, Nanollose continued to make good operational progress which included an R&D breakthrough on its microbial cellulose technology to enable simple shipping & handling of its Jelli Grow product. The Company also completed its second pilot spin of Nullarbor fibres, oversaw the shipment of the resulting fibres to its commercial fabric partner, and set out the framework for the third pilot spin in Q3.

Those developments were complemented by ongoing development of the Company’s ‘vegan leather’, which was used in the construction of an haute couture dress that debuted at a major international film festival.

## **Completion of second pilot production of Nullarbor fibres with Birla Cellulose:**

A major objective of the second pilot run was to produce a batch of fibre with a higher microbial cellulose content than Nullarbor-20™. The second pilot run successfully achieved its target objective to increase the microbial cellulose content, producing the first batch of Nullarbor-30™.

Approximately 150kg of Nullarbor-30 was produced, consisting of 30% microbial cellulose and 70% FSC certified wood pulp, in addition to ~90kg of Nullarbor-20. The fibre has since been shipped to Nanollose’s textile manufacturing partner, Paradise Textiles, for conversion into fabrics. Samples of the fabrics made from the first pilot spin have also been sent to several fashion brands for appraisal, with unanimously positive feedback.

The success of the second pilot spin provides Nanollose and Birla Cellulose with a strong base to commence the third pilot spin, which is scheduled to take place in the September quarter. The third pilot spin will target expanded production volumes and/or increased levels of microbial cellulose in the fibre, which will be informed by further feedback and discussions with fashion brands and manufacturing partners.

### Patent filed for key breakthrough in microbial cellulose technology:

During the quarter, Nanollose filed a new provisional patent application with IP Australia entitled 'Method for Dewatering Microbial Cellulose'. The application covers a novel methodology developed by the Company for drying microbial cellulose (MC). While the innovation was initially developed to provide a dehydrated formulation of Nanollose's proprietary Jelli Grow™ technology, the Company believes it has wider application in other products and processes involving microbial cellulose.

The capacity to dry MC provides a key value-add by reducing associated shipping & handling costs, which historically has been a constraint on the commercial application of MC products. During the month of June, Nanollose representatives visited the Company's China-based commercial production partner, Hainan Guangyu Biotechnology (HGB), in Hainan Province to commence the technology transfer process and discuss a business model for commercialisation.

The two companies are conducting a pilot production run to both optimise the process for commercial-scale manufacture of Jelli Grow and provide material to undertake more extensive testing of Jelli Grow in commercial settings.



Jelli Grow formulation before (L) and after (R) adding water, highlighting the increased water absorption (~100x)

### Ongoing development of 'vegan leather' materials

During the quarter, Nanollose continued its progress towards viable plastic-free 'vegan leather' materials based on the Company's microbial cellulose technology. June quarter highlights included a bespoke project with Prague Design Agency IMMINENT and 181-year old Czech Republic brewery Pilsner Urquell, which involved Nanollose producing vegan leather material by fermenting Pilsner Urquell beer. The material was then used to make an haute couture dress, designed by leading Czech fashion designer Jakub Polanka. The dress was the centrepiece of a Pilsner Urquell promotional campaign at the 57<sup>th</sup> Karlovy Vary International Film Festival (30<sup>th</sup> June – 8<sup>th</sup> July 2023). New and improved vegan leather prototypes have already been produced and the Company looks forward to providing more updates as new collaboration opportunities progress.



Dress designed by Jakub Polanka containing Nanollose's vegan leather material, made from fermented Pilsner Urquell beer.

### **Outlook:**

Following a quarter of positive production updates and R&D breakthroughs, Nanollose is focused on the continued execution of its product development initiatives for environmentally friendly materials based on microbial cellulose. The Company's near-term priorities are outlined as follows:

- Complete third pilot spin of Nullarbor fibres with Birla Cellulose to test capacity for larger production volumes with a higher microbial cellulose content
- Progress the manufacture of textiles and garments from the Nullarbor fibres produced in the 2<sup>nd</sup> pilot spin
- Advance commercial partnership discussions for the manufacture and sale of the Company's new dry Jelli Grow formulation
- Design and produce a suite of vegan leather prototypes to demonstrate the technology across different applications

### **Appendix 4C Quarterly Cash Flow:**

The Company's Appendix 4C Quarterly Cash Flow Report for the quarter ended 30 June 2023 accompanies this announcement. At the end of the quarter, Nanollose had a cash balance of \$544,000.

The Company continued diligent cash management, achieving net cash inflows, expending a total of \$346,000 on the operations of the Company, and receiving a total of \$404,000. Capital expenditure comprised of R&D (\$144,000), advertising and marketing (\$50,000), staff costs (\$28,000) and administrative and corporate costs (\$124,000). Funds received comprised of receipts from customers (\$28,000), an R&D rebate (\$374,000) and interest received (\$2,000). The payments

included at section 6.1 of the attached Appendix 4C relate to Executive Directors' Salaries (\$68,000), Non-Executive Director Fees (\$28,000), and Company Secretary, Accounting and Office Fees (\$25,000).

**[ENDS]**

## **AUTHORITY AND CONTACT DETAILS**

This announcement has been authorised by the Board of Directors of Nanollose.

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## **ABOUT NANOLLOSE**

Nanollose Limited (ASX: NC6) is a leading biotechnology Company commercialising scalable technology to create fibres with minimal environmental impact. Nanollose uses an eco-friendly fermentation process to grow fibres that could become a sustainable alternative to conventional plant-derived cellulose fibres.

The Company's process, which uses streams from various large-scale industries, including food and agriculture, has the ability to produce 'Tree-Free' Cellulose. Cellulose is the hidden polymer building block most consumers know nothing about, but forms a huge part of items used in their everyday life such as clothing, paper and hygiene products.

In January 2021, Nanollose filed a joint patent application with strategic partner, Birla Cellulose, for a high tenacity, Tree-Free lyocell made from microbial cellulose. In February 2022, Nanollose and Birla Cellulose completed the first pilot production of such a lyocell fibre when Birla Cellulose spun 260kg of forest-friendly Nullarbor-20™ fibre for Nanollose at their facilities in India. This fibre has since been sent to several collaborators and has been converted into yarns, fabrics, and garments for testing and evaluation, prior to potential uptake by partners.

## Appendix 4C

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

**Name of entity**

Nanollose Limited

**ABN**

13 601 676 377

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

30 June 2023

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	28	36
1.2 Payments for		
(a) research and development	(144)	(713)
(b) product manufacturing and operating costs	0	0
(c) advertising and marketing	(50)	(243)
(d) leased assets	0	0
(e) staff costs	(28)	(103)
(f) administration and corporate costs	(124)	(417)
1.3 Dividends received (see note 3)	0	0
1.4 Interest received	2	19
1.5 Interest and other costs of finance paid	0	0
1.6 Income taxes paid	0	0
1.7 Government grants and tax incentives (R&D Rebate)	374	374
1.8 Other	0	0
<b>1.9 Net cash from / (used in) operating activities</b>	<b>58</b>	<b>(1,047)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire or for:		
(a) entities	0	0
(b) businesses	0	0
(c) property, plant and equipment	0	0
(d) investments	0	0
(e) intellectual property	0	0

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
	(f) other non-current assets	0	0
2.2	Proceeds from disposal of:		
	(a) entities	0	0
	(b) businesses	0	0
	(c) property, plant and equipment	0	0
	(d) investments	0	0
	(e) intellectual property	0	0
	(f) other non-current assets	0	0
2.3	Cash flows from loans to other entities	0	0
2.4	Dividends received (see note 3)	0	0
2.5	Other (provide details if material)	0	0
2.6	<b>Net cash from / (used in) investing activities</b>	<b>0</b>	<b>0</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	0	0
3.2	Proceeds from issue of convertible debt securities	0	0
3.3	Proceeds from exercise of options	0	0
3.4	Transaction costs related to issues of equity securities or convertible debt securities	0	0
3.5	Proceeds from borrowings	0	0
3.6	Repayment of borrowings	0	0
3.7	Transaction costs related to loans and borrowings	0	0
3.8	Dividends paid	0	0
3.9	Other (provide details if material)	0	0
3.10	<b>Net cash from / (used in) financing activities</b>	<b>0</b>	<b>0</b>

<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	486	1,591
4.2	Net cash from / (used in) operating activities (item 1.9 above)	58	(1,047)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	0	0

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	0	0
4.5	Effect of movement in exchange rates on cash held	0	0
4.6	<b>Cash and cash equivalents at end of period</b>	<b>544</b>	<b>544</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	524	216
5.2	Call deposits	20	270
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>544</b>	<b>486</b>

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	121
6.2	Aggregate amount of payments to related parties and their associates included in item 2	
Payments at section 6.1 relate to Executive Directors' Salaries (\$68,000), Non-Executive Director Fees (\$28,000), Company Secretary, Accounting and Office Fees (\$25,000)		

<b>7.</b>	<b>Financing facilities</b> <i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i> <i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
7.1	Loan facilities	0	0
7.2	Credit standby arrangements	0	0
7.3	Other (please specify)	0	0
7.4	<b>Total financing facilities</b>	0	0
7.5	<b>Unused financing facilities available at quarter end</b>		0
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.</b>	<b>Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1	Net cash from / (used in) operating activities (item 1.9)	58
8.2	Cash and cash equivalents at quarter end (item 4.6)	544
8.3	Unused finance facilities available at quarter end (item 7.5)	0
8.4	Total available funding (item 8.2 + item 8.3)	544
8.5	<b>Estimated quarters of funding available (item 8.4 divided by item 8.1)</b>	N/A
<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?	
	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?	
	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?	
	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>		

## 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: 26 July 2023

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Authorised by: The Board of Directors

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(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.