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NANOLLOSE FILES NEW PATENT APPLICATION FOR KEY BREAKTHROUGH IN MICROBIAL CELLULOSE TECHNOLOGY

Highlights:

- **New provisional patent application filed with IP Australia entitled ‘Method for Dewatering Microbial Cellulose’**
- **Application covers 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**
- **Jelli Grow™ technology is additional to and separate from the Company’s core Nullarbor™ fibre technology, which continues to progress well in development with major commercial partners**
- **Pilot production run for the advanced formulation to commence with key microbial cellulose supply partner, to optimise process for commercial-scale manufacture**
- **In anticipation of commercialisation, Nanollose has now secured trade mark protection around Jelli Grow™ in Australia, New Zealand, China, the EU and the UK, with trade mark applications pending in Singapore, Japan, Canada and the US**

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 announce it has filed a new provisional patent application with IP Australia, adding to its growing portfolio of intellectual property.

The application, entitled “Method for Dewatering Microbial Cellulose” covers the production process for a readily rehydratable dry formulation of Nanollose’s Jelli Grow™ soil-less seed raising medium.

The ability to dry and then rehydrate the microbial cellulose represents a major advancement over the Company’s previous Jelli Grow formulation, and was developed in response to feedback from prospective customers.

A key attribute of the novel methodology for drying microbial cellulose is that it prevents hornification (the hardening of cellulose upon drying). The new dehydrated formulation has a significant advantage over the previous wet formulation, in that it dramatically reduces the cost and complexity of shipping, storage and handling.

The technology allows end users to regenerate the medium simply by adding water upon receipt of the dehydrated formulation, which simplifies the shipping process and overcomes a key barrier to commercial uptake.

While this technology was initially developed to provide a dehydrated formulation of Jelli Grow, the Company believes it has wider application in other products and processes involving microbial cellulose.



Image 1: Jelli Grow formulation before (L) and after (R) adding water, highlighting the increased water absorption (~100x)

Whilst the Company's core Nullarbor fibre technology remains the primary business focus of the Board and management team, this new large addressable horticultural market presents the Company with the opportunity to pursue several additional revenue channels with potential commercial significance.

The exciting R&D breakthrough with Jelli Grow follows the recent transition of the Nullarbor™ technology from the laboratory to the pilot phase, which in turn has facilitated an internal reallocation of R&D resources towards the development of Nanollose's other applications for microbial cellulose, including Jelli Grow and vegan leather.

Following the filing of the patent, Nanollose can now begin the commercialisation process for its upgraded Jelli Grow soil-less seed germination platform. The Company will work with its microbial cellulose supply partner, Hainan Guangyu Biotechnology, to produce a pilot batch of the new Jelli Grow formulation.

The primary aim of the pilot production run will be to optimise the process for commercial-scale manufacture. As a by-product of the production process, it will also generate test material for distribution to potential customers for testing under commercial conditions across various horticulture applications.

In anticipation of commercialisation, Nanollose has recently extended its trademark protection around Jelli Grow™ which is now granted in Australia, New Zealand, China, the EU, the UK, and pending in Singapore, Japan, Canada and the US.

The Company anticipates filing the application in numerous other jurisdictions in due course through the Patent Cooperation Treaty (PCT).

Management commentary:

Executive Chairman Dr Wayne Best said: *"We are delighted with the outcome of this R&D project, which marks a major breakthrough with respect to the commercial application of Jelli Grow. In addition to a greatly improved product, it has delivered a valuable methodology for drying microbial cellulose and preventing hornification, which has many other potential applications. This is a significant development for the business and solves a key pain point for the scaled rollout of microbial cellulose manufacturing operations for a number of applications. In that context, the patent application marks an important step for the business to enhance our intellectual property portfolio. We're excited to work with Hainan Guangyu Biotechnology to commercialise the technology and look forward to providing more market updates as it unfolds."*

[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.