Jatcorp (ASX: JAT), at the forefront of innovative technology servicing the world's largest retail markets. With a track record of successful product development and distinguished technology. JAT is a leading producer of supplementary food and plant-based meats.

17 May 2021

ASX ANNOUNCEMENT

JAT to manufacture and sell immunity support supplementary food tested by The University of Sydney against SARS-CoV-2

Highlights

- **A series of JAT products has shown promising results in a research project undertaken with the Centre for Advanced Food Engineering at The University of Sydney which tested for antiviral activity against SARS-CoV-2 (the virus which causes the disease known as COVID-19)**
- **5 Formulas developed by JAT neutralised SARS-CoV-2 infection at concentrations of 0.4-1.0 mg/ml in a cell-based assay designed to replicate infection in humans**
- **While these findings are promising, additional research is recommended for making product specific health claims**
- **JAT is the owner of the intellectual property created as part of the research agreement with the The University of Sydney project**
- **The formulas developed by JAT will meet food standards of both Australia and China respectively**
- **JAT will manufacture and distribute the researched immunity support formula in selected countries as supplementary food products**
- **The recently completed major upgrade to JAT's ANMA plant has resulted in a capacity to manufacture in excess of 1 million cans per month, including the new 5 formulas**

On 27 March 2020, Jatcorp Limited (ASX: JAT) announced it had entered into an agreement with The University of Sydney to undertake a research project (**Project**) to develop food supplements with antiviral properties against a broad range of pathogens.

The research aimed to develop an immunity support formula from naturally derived products for testing antiviral activity against several common infectious diseases such as influenza, herpes simplex virus and norovirus. The Project was expanded to include the SARS-CoV-2 coronavirus.

All IP created from the Project is owned by JAT.

Using some of the interim results of the Project conducted by The University of Sydney, JAT formulated five new supplementary food formulas (**JAT Products**) containing bovine lactoferrin (**BLf**) which were tested in vitro against SARS-CoV-2, the virus which causes the disease known as COVID-19.

The Project has now been completed and The University of Sydney has provided JAT with a final report (**Report**) detailing the results. An extract of the results is set out in the Annexure below. The Report states that:

- "BLf provided by JATcorp demonstrated potent antiviral activity against Herpes (HSV) in a VERO cell plaque assay and by digital droplet PCR…
- BLf provided by JATcorp showed an unexpected antiviral activity against SARS-

CoV-2, the virus that causes COVID-19...

- Using both plaque assay and ddPCR methods, freshly dissolved BLf did not exhibit anti-influenza activity under multiple experimental conditions. While prior publications have reported anti-influenza effects of native BLf, these used different flu strains. As BLf derived peptides have been shown to reduce viral replication in the A/PR/8/34 H1N1 strain used in our assays, we speculate that a response may be seen in this assay system with digested or modified JATcorp BLf."

As a result of the potential antiviral activity against herpes (HSV), JAT is planning a further project to create a topical delivery system for HSV, which would be incorporated into its Poupin skincare brand with a goal being the suppression of herpes sore breakouts.

Specific Covid 19 report

As part of the Project, The University of Sydney has provided a separate report (**Covid-19 Report**) entitled:

> *Testing Anti-viral Activity of Jatcorp Products Against SARS-CoV-2 (COVID-19) Using an In Vitro Model*

In the Covid-19 Report, the authors state:

- *Five supplementary food formulas developed by Jatcorp were tested against SARS-CoV-2 in vitro.*
- *We employed a sophisticated in vitro biological assay to model inhibition of COVID-19 infection on a cellular level. This system utilises human cells rather than non-human/primate cells and is currently used to assay human clinical samples for SARS-CoV-2 infection.*
- *All Jatcorp supplementary food formulas demonstrated promising antiviral activity against the SARS-CoV-2 virus in this in vitro assay.*
- *All five formulas neutralised SARS-CoV-2 infection at concentrations of 0.4-1.0 mg/ml in this model.*
- *Continued research can be undertaken to further test new and other formulation of Jatcorp products for their potent antiviral activities by the in vitro model.*
- *While these findings are very promising, additional research is recommended for making product specific health claims.*

JAT is planning a further project to demonstrate clinical efficacy for the treatment or prevention of COVID-19. However, JAT can manufacture and sell the JAT Products as immunity support supplementary food products under the existing FSANZ and GB Standards.

The JAT Products

The JAT Products which the Report concludes contain the antiviral properties are as follows:

1. Jinvigorate - Formulated Supplementary Food- Immune Support – Platinum - FSANZ

2. Moroka- Formulated Milk Powder – Platinum - GB

3. Jinvigorate - Formulated Supplementary Food- Immune Support-Diamond - FSANZ

4. Jinvigorate - Formulated Milk Powder – Supreme - GB

5. Abbeyard- Formulated Milk Powder - Platinum - GB

Compliance with food standards in Australia, New Zealand and China

Each of the JAT Products will be in-house brands of JAT and, as set out below, commercial sales will commence in the second half of 2021.

Two of the Jinvigorate products listed above (Products 1 and 3 designated "FSANZ") Will meet the Australian and New Zealand food standards as set out by the statutory authority, Food Standards Australia New Zealand. Both products will be sold in Australia and New Zealand as a food product and therefore no further regulatory approval is required.

The other three products above (Product 2, 4 and 5 designated "GB") will meet the China food standards and will be sold in China as a food product with no further regulatory approval required. No Chinese import permits are required for the three products.

Expansion of Markets for the JAT Products

As the JAT Products are either reformulations of current products or new products, new packaging is required for each product. Due to the lead time to order and receive the packaging from the packaging manufacturers, the JAT Products will only be commercially available in the second half of 2021. Each of the JAT Products have been manufactured in commercial quantities and are being held as inventory awaiting the new packaging.

JAT will comply with the packaging and labelling requirements for the JAT Products in each of the countries to which the JAT products will be exported. Accordingly, the labelling is likely to be different in each country and any claims made on the packaging will be in accordance with the laws of the particular country.

JAT will initially promote the JAT Products to distributors which already sell JAT products in a number of countries including Australia, China, Hong Kong, New Zealand, Korea and Vietnam. JAT is also in discussions with potential distributors for Japan, US, UK, Malaysia and UAE markets.

The JAT directors expect an increase in the demand for each of the JAT Products, although they are not yet in a position to forecast the quantum increase in demand, if any.

Manufacturing

Each of the JAT Products provided to the University of Sydney as part of the Project will be manufactured at JAT's ANMA state-of-the-art manufacturing facility in Melbourne. As announced previously to the ASX, a major upgrade to the ANMA plant was completed in April 2021. As a result, the plant now has a capacity to manufacture in excess of 1 million cans per month.

Funding

JAT is seeking shareholder approval at a meeting to be held on 7 June 2021 to raise additional capital for the repayment of debt and for other specific purposes. Assuming all approvals are obtained at that meeting and the subsequent capital raising proceeds, JAT's cash flow is expected to significantly improve as a result of the reduction of interest costs and additional working capital becoming available. JAT believes that it will have sufficient working capital to meet the additional inventory costs as a result of the expected increase in demand for the five formulas developed by JAT and tested by The University of Sydney for SARS-CoV-2 (COVID-19).

This announcement is authorised by JAT's Managing Director, Wilton Yao.

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About Jatcorp Limited

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ANNEXURE

Technical details – Study Results

The results are obtained based on independent tests directed by the Centre for Advanced Food Engineering, The University of Sydney, as part of the collaborative research project with Jatcorp.

Table 1. Concentrations at which JAT formulas neutralize 50 and 100% of SARS-CoV- 2 activity

Formula No.	Formula Name	EC_{50} (mg/ml)	100% neutralization (mg/ml)
1	Jinvigorate - Formulated Supplementary Food- Immune Support- Platinum – FSANZ	0.42	0.71
2	Moroka- Formulated Milk Powder – Platinum– GB	0.39	1.00
3	Jinvigorate-Formulated Supplementary Food-Immune Support-Diamond-FSANZ	0.32	0.45
4	Jinvigorate - Formulated Milk Powder – Supreme – GB	0.23	0.38
5	Abbeyard- Formulated Milk Powder - Platinum – GB	0.38	0.44

The tested Jatcorp formulas demonstrated the ability to prevent cell death from SARS-CoV-2 infection (Figure 1). All five mixtures demonstrated strong antiviral activity at a concentration of 0.4-1.0 mg/ml. The concentrations required to prevent 50% of cell death (EC_{50}) were calculated to range between 0.23-0.42mg/ml. All formulas showed minimal cytotoxicity at 1mg/ml and there was evidence for promotion of cell growth. Four formulas (Formulas 1-4) also demonstrated negligible cytotoxicity at the highest tested concentration, 4mg/ml.

All antiviral tests were conducted in quadruplicate using an advanced cell model designed to replicate infection in humans. The testing platform uses genetically modified Human Embryonic Kidney (HEK) cells to express the two known native receptors of SARS-CoV-2, Angiotensin-Converting Enzyme 2 (ACE2) and Transmembrane Protease Serine 2 (TMPRSS2). Virus neutralisation is quantified using a sensitive fluorescence microscopy approach which detects the level of cell survival following exposure to the virus.

These support the potential of food supplements containing bovine lactoferrin to impair SARS-CoV-2 infection. However, for specific health claims to be made then additional research is recommended. A direct comparison with food supplements lacking lactoferrin would help support the importance of lactoferrin as an active ingredient.

Figure 1. Data from antiviral screening demonstrates that formulas inhibit SARS- CoV-2 (COVID-19) infection *in vitro*. Data is presented as the mean and standard error of each condition conducted in quadruplicate.